PHILIPS 420P10

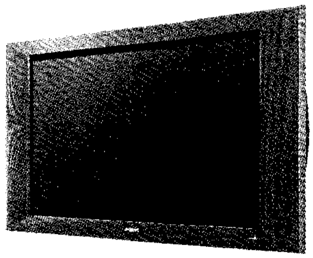
MODEL

SERVICE MANUAL

Colour Television

Chassis FTV1.9DE AA

Service
Service
Service



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Service Manual

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PHILIPS

1. Technical specifications

1.1 Technical data D-box

Mains voltage : 85 - 264Vac
: 50Hz - 60Hz
Power dissipation : 400W
Stand-by dissipation : < 1W

1.2 Connection facilities

1.2.1 Specification of the terminal sockets

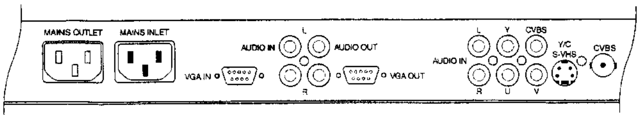
MAINS OUTLET
MAINS INLET
AUDIO IN
L
AUDIO OUT
VGA IN
R
VGA OUT
L
Y
CVBS
AUDIO IN
Y/C
S-VHS
CVBS
R
U
V

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Figure 1-1

VGA-in

1	- R	(0.7Vpp 75Ω)	
2	- G	(0.7Vpp 75Ω)	
3	- B	(0.7Vpp 75Ω)	
4	- Reserved		
5	- Bus-gnd		⏚
6	- R-gnd		⏚
7	- G-gnd		⏚
8	- B-gnd		⏚
9	- RC5		
10	- GND		⏚
11	- Config_Ident		
12	- Bus1 (TxD/ Rxd or SDA)		
13	- Hsync		
14	- Vsync		
15	- Bus2 (TxD/ RxD or SDA)		

VGA-out

1	- R	(0.7Vpp 75Ω)	
2	- G	(0.7Vpp 75Ω)	
3	- B	(0.7Vpp 75Ω)	
4	- Reserved		
5	- gnd		⏚
6	- R-gnd		⏚
7	- G-gnd		⏚
8	- B-gnd		⏚
9	- Reserved		
10	- GND		
11	- Reserved		
12	- Reserved		
13	- Hsync		
14	- Vsync		
15	- Reserved		

Audio VGA-in

- Cinch Audio	L(0.5Vrms >= 10kΩ)	◎
- Cinch Audio	R(0.5Vrms >= 10kΩ)	◎

Audio VGA-out

- Cinch Audio	L(0.5Vrms >= 1kΩ)	◎
- Cinch Audio	R(0.5Vrms >= 1kΩ)	◎

SVHS

1	- GND		⏚
2	- GND		⏚
3	- Y	(1Vpp / 75Ω)	⊕
4	- C	(0.3Vpp / 75Ω)	⊕

Audio_in:

- Cinch Audio	L (0.5Vrms >= 10kΩ)	◎
- Cinch Audio	R (0.5Vrms >= 10kΩ)	◎

CVBS

- BNC - CVBS	(1Vpp / 75Ω)

YUV

- Y	(1Vpp / 75Ω)	◎
3 - U	(1Vpp / 75Ω)	◎
4 - V	(1Vpp / 75Ω)	◎

1.3 Chassis overview

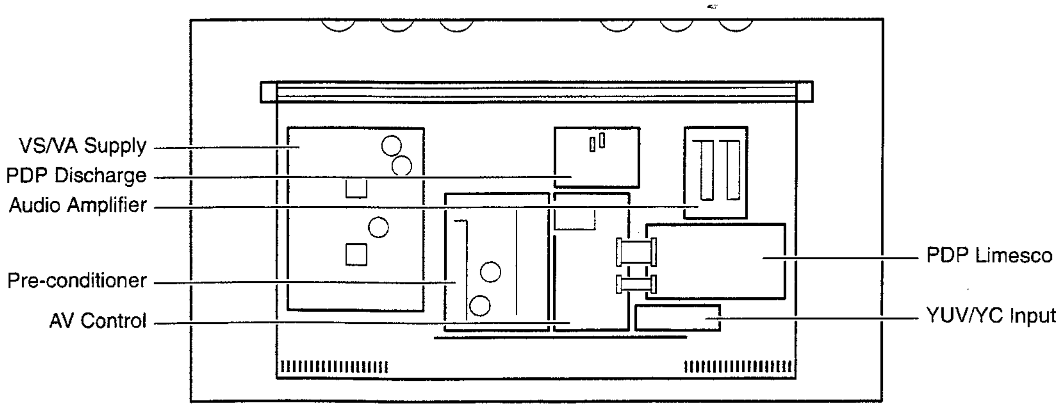
VS/VA Supply
PDP Discharge
Audio Amplifier
Pre-conditioner
AV Control
PDP Limesco
YUV/YC Input

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Figure 1-2

2. Safety instructions, warnings and notes

2.1 Safety instructions ⚠

It is not allowed to operate the FTV-set without glass plate. One function of this glass plate is to absorb Infrared Radiation. Without this glass plate the level of Infrared Radiation produced by the plasma display could damage your eyes.

1. Safety regulations require that during a repair:
   - the set should be connected to the mains via an isolating transformer (in this particular case a transformer of ≥ 800 VA);
   - safety components, indicated by the symbol ⚠ , should be replaced by components identical to the original ones;
2. Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points.
   - Note: The wire trees should be routed correctly and fixed with the mounted cable clamps.
   - The insulation of the mains lead should be checked for external damage.
   - The electrical DC resistance between the mains plug and the secondary side should be checked (only for sets that have a mains isolated power supply). This check can be done as follows:
     - unplug the mains cord and connect a wire between the two pins of the mains plug;
     - set the mains switch to the on position (keep the mains cord unplugged!);
     - measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 MΩ and 12 MΩ;
     - switch off the TV and remove the wire between the two pins of the mains plug.
   - The cabinet should be checked for defects to avoid touching of any inner parts by the customer.

2.2 Warnings

1. ESD ⚠

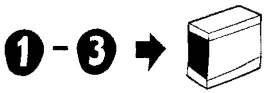
All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ⚠). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.

1. Available ESD protection equipment:
   - complete kit ESD3 (combining all 6 prior products - small table mat) 4822 310 10671
   - wristband tester 4822 344 13999
2. Never replace modules or other components while the unit is switched on.
3. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

1. A glass plate is positioned before the plasma display. This glass plate can be cleaned with a slightly humid cloth. If due to circumstances there is some dirt between the glass plate and the plasma display panel it is recommended to do some maintenance by a qualified service employee only.
2. Never disconnect the power display cable when the set is operating
3. With DST no failures (error-codes) can be red, when the set is in Service-mode.
4. If DST reacts with 'error 2', there is no communication between set and DST. Note that IR-transmitter LED is positioned at right side of IR-receiver eye of the E-box. Take into account that receiver-LED on DST is positioned not in the middle but at the left side. Point corresponding LED's to each other. In case the amount of Infrared produced by the screen pollutes the communication, the set can be set in Standby-mode. Then still the error-messages can be retrieved.

3. Directions for use



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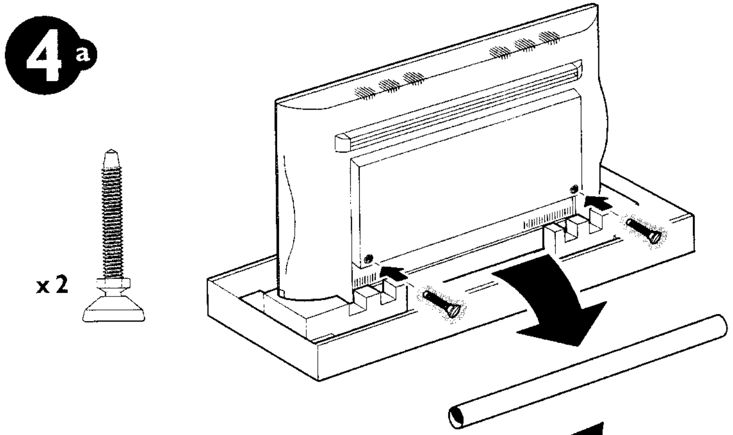

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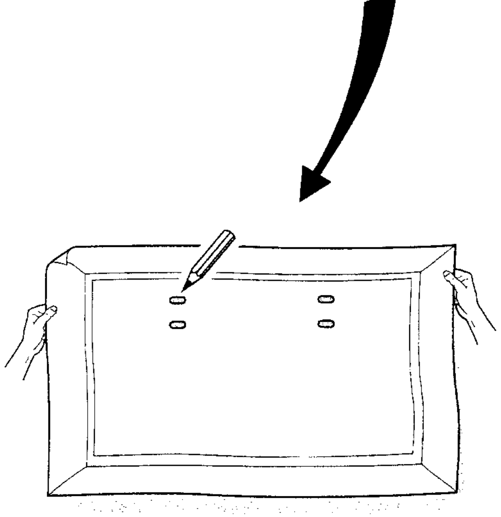
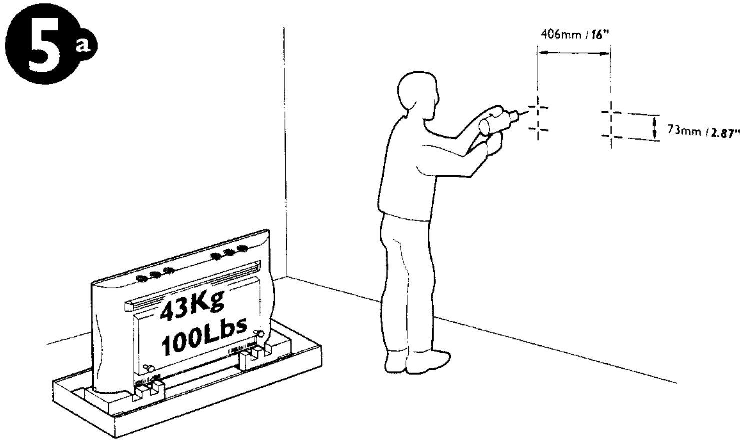
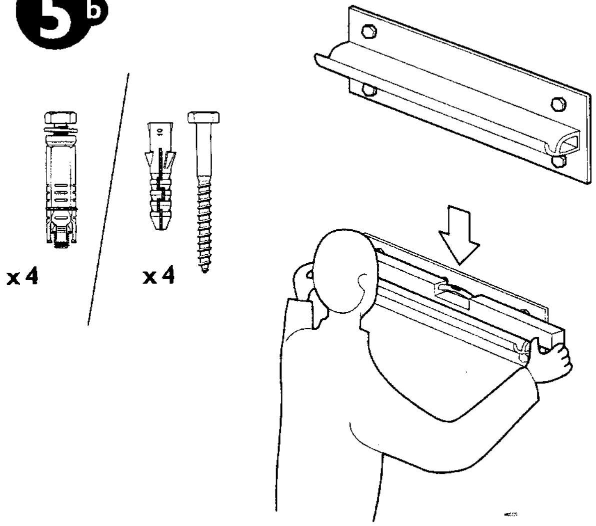


5a


406mm / 16"
73mm / 2.87"
43Kg
100Lbs

5b



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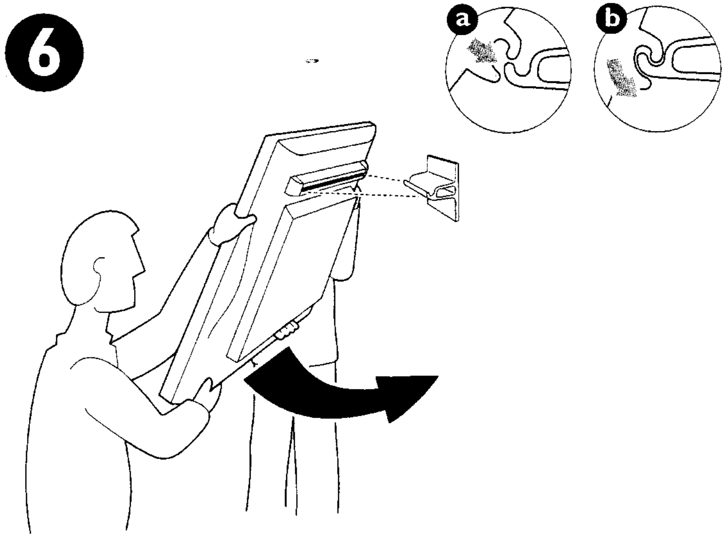
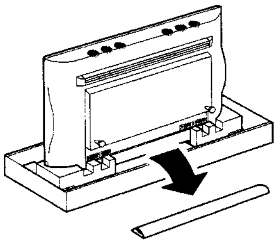
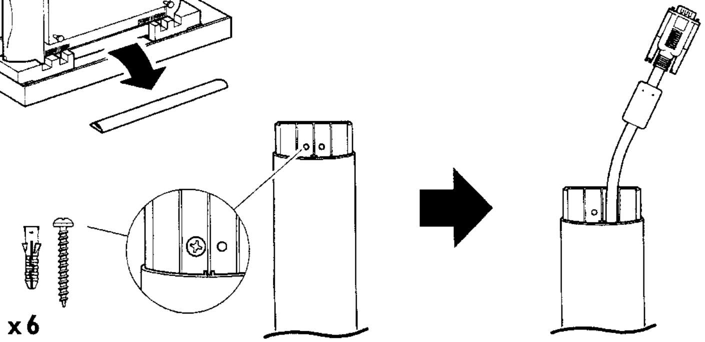
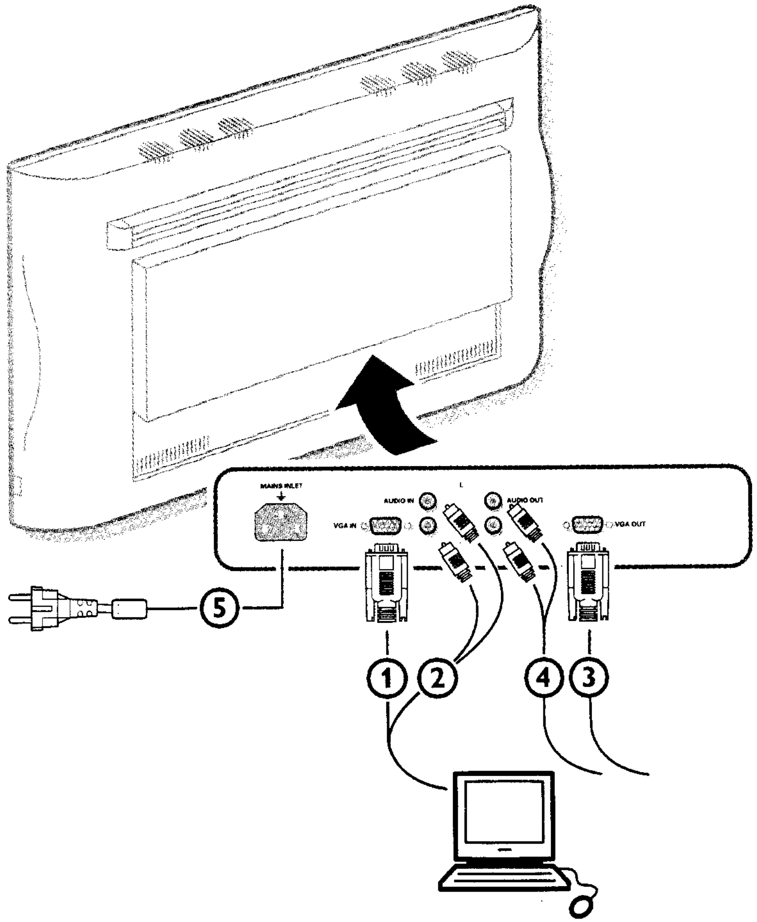







MAINS INLET
AUDIO IN
L
AUDIO OUT
VGA IN
VGA OUT
5
1
2
4
3

Unpacking and wall mounting instructions

For the unpacking instructions follow the illustrated steps printed on the packaging (outside and inside).
For the wall mounting instructions follow the illustrated steps ❹ to ❻ printed on the first pages of this instruction booklet.

Make sure that the wall mount is being fixed securely enough so that it meets safety standards. The weight of the monitor (excl. packaging) is about 43 kg.

Connect your computer

❶ Connect one end of the VGA cable ① supplied to the video card of the computer and the other end to the **VGA IN** connector at the rear side of the monitor. Fix the connectors firmly with the screws on the plug.

❷ In case of a Multimedia computer, connect the audio cable ② to the audio outputs of your Multimedia computer and to the **AUDIO IN R** (right) and **L** (left) inputs of the monitor.

Daisy chaining

The Active Loop Through facility makes it possible to make a daisy chain with a second VGA monitor.

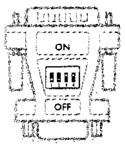
❸ Connect one end of another VGA cable ③ to the **VGA OUT** connector at the rear side of the monitor and the other end to the **VGA IN** connector of a second VGA monitor.

❹ In case of a Multimedia computer, also connect the audio cables ④ to the **AUDIO L** and **R** outputs of the monitor and to the **AUDIO IN** L and **R** inputs of the second VGA monitor.

Note: only use the VGA cables supplied or use cables that are specially delivered with the monitor.

Connect your Apple Macintosh* computer

Attention: Macintosh computers with separate H and V synchronisation signals can be used together with the supplied adaptor. Macintosh computers with Composite Sync and Sync on Green signals may need a special (not supplied) adaptor or cable. Contact your dealer.



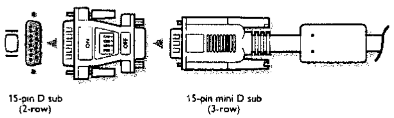
Connect the supplied switchable adaptor for Apple video connectors to one end of a VGA cable.

Put the DIP switches on the adaptor in the following positions :

1	2	3	4
off	off	on	on

Connect the end of the VGA cable with the adaptor to the video card of the computer and the other end to the **VGA IN** connector on the back of the monitor.

Screw the connectors down firmly.



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* Apple Macintosh is a registered trademark of Apple Computer, Inc.

Computer Display modes

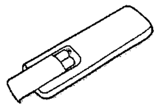
VGA	640x480	31.468 kHz	60 Hz
VGA	640x400	31.468 kHz	70 Hz
VGA	640x350	31.468 kHz	70 Hz
MAC II	640x480	35.000 kHz	67 Hz
SVGA	800x600	35.156 kHz	56 Hz
XGA	1024x768	45.000 kHz	56 Hz

When a VGA computer is connected, the selection is made automatically.

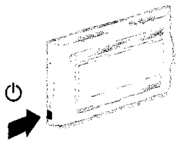
A message is displayed when the monitor does not support one of the above mentioned VGA modes.
Switch your computer to a correct display mode.

Operation

❶ **Insert the mains plug** ⑤ (see previous page for the illustration) supplied into the mains inlet at the back of the monitor and in the wall socket.
Please, only use the supplied rim-earthed mains cord with its built-in filter.

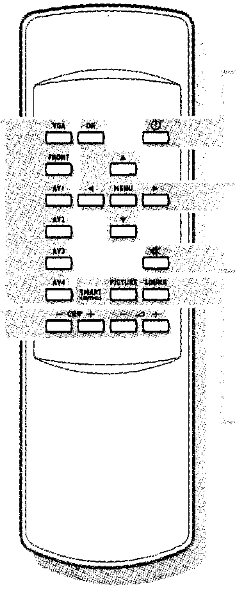


❷ **Remote control:** remove the cover of the battery compartment.
Insert the 2 batteries supplied (Type LR6AA-1.5V).
The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many countries batteries may not be disposed of with your household waste. Please check on how to dispose of batteries according to local regulations.



❸ **Switch the monitor on :** Press the power button ⏻ at the right side of the monitor.
A green indicator lights up and the screen comes on.
When the monitor does not receive a certain VGA signal the screen remains black.
Make sure that your PC is switched on and is in the correct display mode.

Use of the remote control



VGA no function
FRONT no function
AV1, AV2, AV3, AV4 no function

- CH/P + no function
◢ press - or + to adjust the volume

⏻ no function

OK to activate your choice

MENU to switch the **VGA** menu on/off

cursor keys to select your choice and to alter a selected adjustment

◀ ▶ Picture format
In **VGA** mode, press the ◀ or ▶ keys to switch between a 4:3 or a 16:9 picture format.

🔇 Mute key
temporarily mute the sound or restore it.

SMART CONTROLS
PICTURE/SOUND no function

VGA menu

❶ Press the **MENU** key to switch on the **VGA** menu.
❷ Select one of the symbols with the ▲ and ▼ keys:
- ◑ for contrast
- ☼ for brightness,
- for colour temperature
- for horizontal picture position
- for vertical picture position
- ◢ for volume

❸ Press the ◀ and ▶ keys to alter the selected adjustment.
❹ Press the **MENU** key again to switch off the **VGA** menu.

Tips

Ambient temperature
Do not hang up the monitor above a central heating or other heating sources.

Active Loop Through
The Active Loop Through facility makes it possible to make a daisy chain for VGA. Maximum 2 sets.

Care of the screen
Clean the anti-reflex coated flat glass screen with a slightly damp soft cloth. Do not use abrasives solvents as it can damage the glass surface of the screen.

Plasma Display characteristics
When switching over to another picture after having displayed the same still picture for a long time (many hours), it may happen that some parts from the previous picture will remain on screen due to a kind of memory effect. This ghost picture will disappear after some time. To avoid this effect change the pictures regularly or for PC use you can turn on a screen saver in your computer.
Philips has built in an automatic shift of the picture every 5 minutes to avoid this effect and to prolong the life of the screen.
Very incidentally and after a longer period of unuse (approx. 1 year) the screen may display some strange colour deficiencies. This is quite normal for plasma displays and these effects will disappear after the set has been turned on for some time.
A plasma display consists of more than 1.2 Million colour pixels. It is within industry standards that very few pixels (< 0.001%) may be defective, even for a new set. There is however no reason to doubt about the quality of the set.
The plasma display technology operates with rare gases which are being influenced by air pressure. Up to an altitude of 2000 m above sea-level, the display is functioning fine. Operating the set at a higher altitude, the picture becomes unstable and the picture performance is deteriorating. Bringing the set below 2000 m it works fine again. Transportation has no influence.

Control of peripheral equipment
The infrared signals of the screen may influence the reception sensitivity of other peripherals. Solution: replace the batteries of the remote control or change position of other equipment. E.g. keep away a wireless headphone from within a radius of 1.5 m.

No stable or not synchronised VGA picture
Check if you have selected the correct VGA mode in your PC (640x480, 640x400, 640x350, MAC II, SVGA, XGA).

No picture or no sound
Are the supplied cables connected properly? (The power cable to the display, the VGA cables, the audio cables,...)
Is your PC switched on?
Do you see a black screen and the indicator in front of the monitor lights up green, this means that the display mode is not supported.
Switch your VGA source to a correct mode.

Remote control
If your monitor no longer responds to the remote control, the batteries may be exhausted.

If your problem is not solved:
Switch your monitor off and then on again.
Never attempt to repair a defective monitor yourself.
Check with your dealer or call a TV technician.

Transport
Keep the original packaging to transport the monitor if needed.

End of life directives
Philips is paying a lot of attention to produce environmentally-friendly in green focal areas. Your new monitor contains materials which can be recycled and reused.
At the end of its life specialised companies can dismantle the discarded monitor to concentrate the reusable materials and to minimise the amount of materials to be disposed of.
Please ensure you dispose of your old monitor according to local regulations.

How to dispose of batteries ?
The batteries supplied do not contain the heavy metals mercury and cadmium.
Nevertheless in many countries batteries may not be disposed of with your household waste. Please ensure you dispose of batteries according to local regulations.

Miscellaneous
- Ambient temperature: + 5~ + 45°C
- Maximum operating altitude: 2000 m
- Mains: AC 100-240V
- Power consumption: around 350W
- Standby consumption: 1 W
- Weight (excl. packaging)
  Display: 42.5 kg
- Dimensions (wxhxd):
  Display: 122.2 x 68.1 x 14.6 cm
- Wall mounting bracket included

4. Mechanical instructions

4.1 Introduction:

There are pre-defined service positions for the following panels:

1. VS/VA SUPPLY panel.
2. PDP DISCHARGE panel.
3. AUDIO AMPLIFIER panel.
4. PRE-CONDITIONER panel.
5. AV CONTROL panel.
6. PDP LIMESCO panel.
7. YUV/YC INPUT panel.
8. LED DISPLAY panel.
9. SWITCH DISPLAY panel.

Before these panels can be accessed, the rear cover has to be removed:

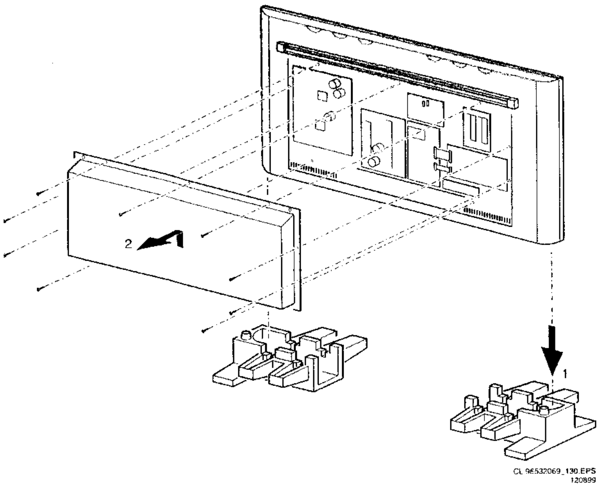

2
1
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Figure 4-1

1. Place the Display Box in the service stand via 2 reinforced cushions (order code: 3122 126 30181).
2. Remove the 9 fixation screws of the rear cover.
3. Remove the rear cover (during removal push it slightly upwards).

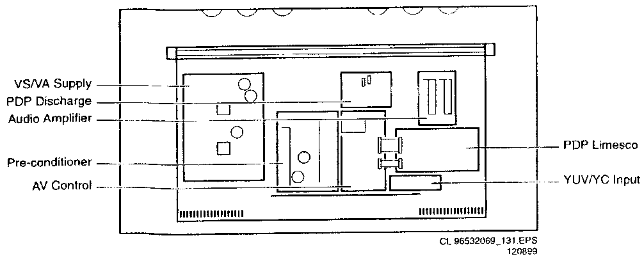
VS/VA Supply
PDP Discharge
Audio Amplifier
Pre-conditioner
AV Control
PDP Limesco
YUV/YC Input
CL 96532069_131.EPS
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Figure 4-2

1. All panels are now accessible.

4.1.1 VS/VA SUPPLY panel.

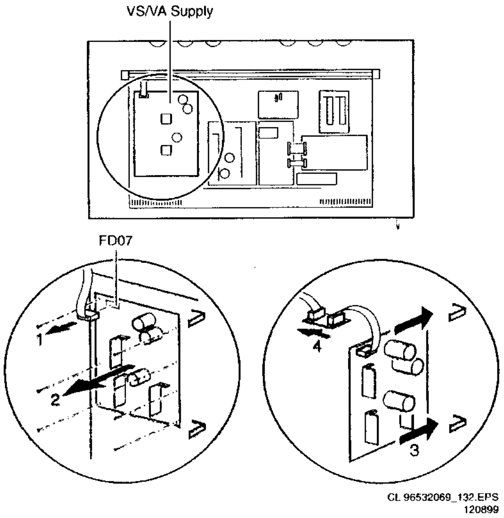
VS/VA Supply
FD07
1
2
4
3
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Figure 4-3

1. Disconnect Fan Supply cable from connector FD07 in the upper left corner [1].
2. Remove the 7 fixation screws of the panel [2].
3. Place panel on the 2 hinges, which are located near the right corners of the panel [3].
4. Use the mechanical service part (extension cable assembly, 12NC: 3122 785 90006) to extend the Fan Supply cable [4].
5. The copper side is now accessible from the left.

4.1.2 PDP DISCHARGE panel.

As in the FTV 1.5, this panel must be exchanged completely if defective.

4.1.3 AUDIO AMPLIFIER panel.

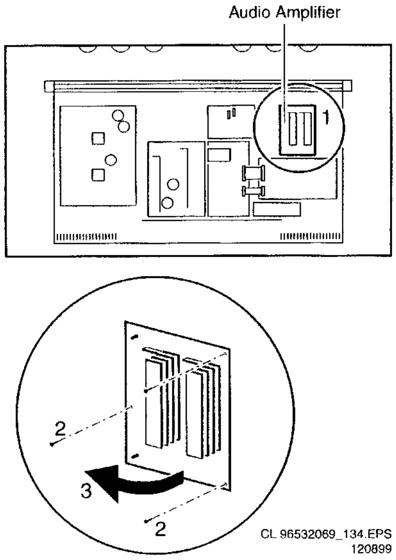
Audio Amplifier
1
2
3
2
CL 96532069_134.EPS
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Figure 4-4

1. Some testpoints are accessible at the B-side [1].
2. If this is not sufficient, remove the 3 fixation screws of the panel [2].
3. Panel now can be hinged on the left side to access the A-side (soldering side) [3].

4.1.4 PRECONDITIONER panel.

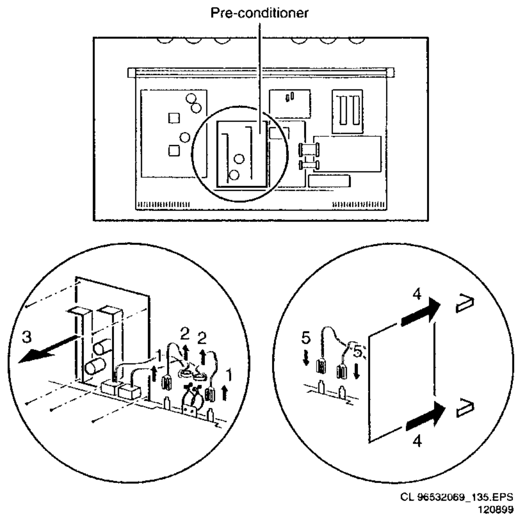

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Figure 4-5

1. Disconnect the 2 grounding wires from the shielding plate by pressing the small lever on the connector while pulling [1].
2. Remove the 2 ferrite ring cores from their fixations [2].
3. Remove the 5 fixation screws of the panel [3].
4. Place panel on the 2 hinges, which are located, near the left corners of the panel [4].
5. Reconnect grounding wires to the extra connectors on the shielding plate at the left side [5].
6. The copperside becomes accessible now from the right side.

4.1.5 AUDIO VIDEO CONTROL panel.

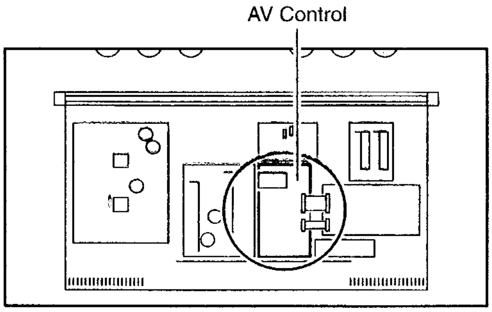

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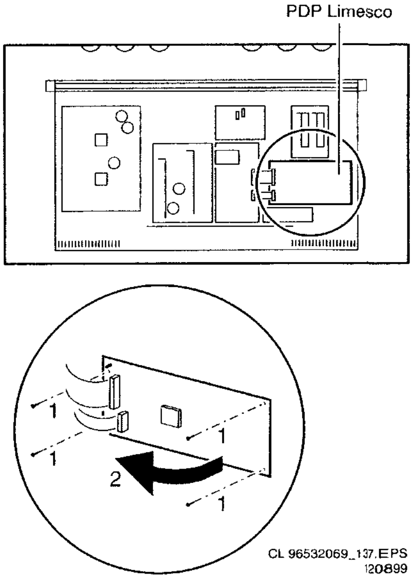
Figure 4-6

This panel has no service position for accessing the A-side, however all service test points are accessible at the B-side (see Service Manual).
In case some components must be (de)soldered, all fixation screws (6 for the panel, 5 at the metal connector plate) and all cables must be removed to access the A-side.

4.1.6 PDP LIMESCO panel.



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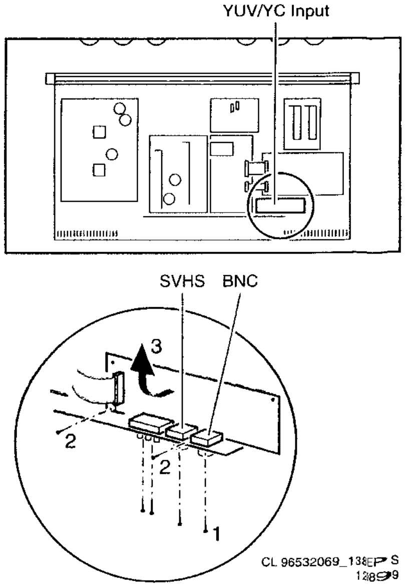
120899

Figure 4-7

All SMC's are located on the B-side, so all testpoints are accessible. In case some components must be (de)soldered, the hinge construction can be used to access the A-side.
1. Remove the 4 fixation screws of the panel [1].
2. Panel can now be hinged to access soldering side [2].

4.1.7 YUV/YC INPUT panel.



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120899

Figure 4-8

This panel has no pre-defined service position. For access of the A-side, the panel has to be removed:
1. Remove the 4 screws at the metal connector plate [1].
2. Remove the 2 fixation screws of the panel [2].
3. Panel can be removed now to access the A-side [3].

4.1.8 LED DISPLAY panel.

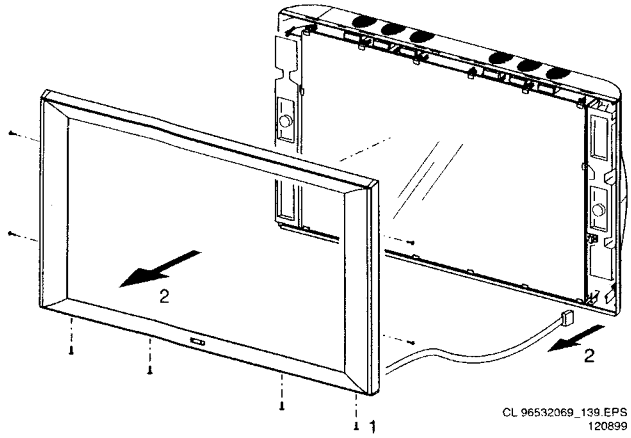

2
2
1
CL 96532069_139.EPS
120899

Figure 4-9

1. Remove 2 x 2 screws at the sides and 4 screws at the bottom of the front cover [1].
2. Remove the front cover (it hinges at the top). During removal unplug the cable of the LED DISPLAY panel at the SWITCH DISPLAY panel (connector SD11) [2].

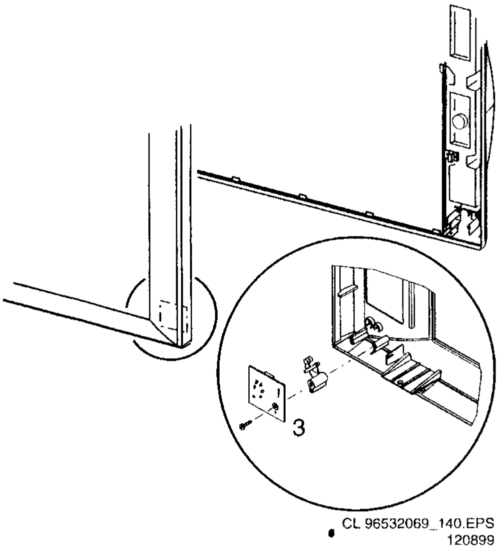

3
CL 96532069_140.EPS
120899

Figure 4-10

1. The LED DISPLAY panel can be removed now by unscrewing 1 fixation screw [3].

4.1.9 SWITCH DISPLAY panel.

1. Remove front cover (for a description see Chapter 1.1.8 'LED DISPLAY panel').

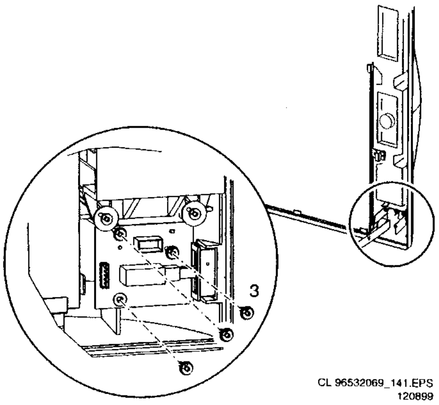

3
CL 96532069_141.EPS
120899

Figure 4-11

1. The SWITCH DISPLAY panel can be removed now by unscrewing 3 fixation screws [3].

4.2 Exchanging parts

Some parts of the FTV1.9 Display Box must be exchanged if defective:

1. GLASS PLATE.
2. LOUDSPEAKER.
3. PLASMA DISPLAY PANEL [PDP].

4.2.1 Exchanging of the GLASS PLATE.

1. First unplug (remove Mains and VGA cable) the Display Box .
2. Remove front cover (for a description see Chapter 1.1.8 'LED DISPLAY panel').

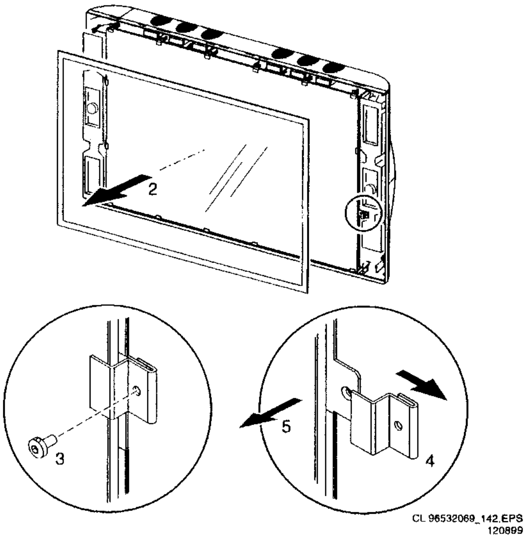
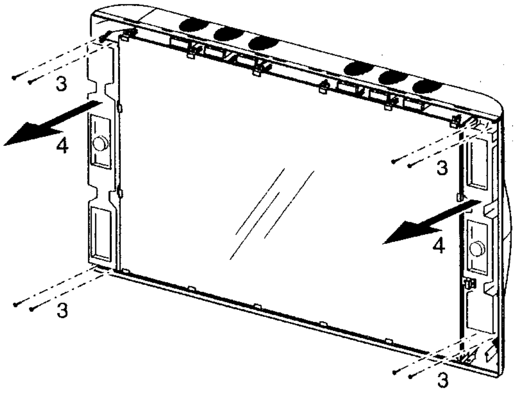

2
3
5
4
CL 96532069_142.EPS
120899

Figure 4-12

1. Now the GLASS PLATE can be removed by unscrewing all screws [3] and removing all glass clips [4].

4.2.2 Exchanging of a LOUDSPEAKER.

1. First unplug (remove Mains and VGA cable) the Display Box.
2. Remove front cover (for a description see Chapter 1.1.8 'LED DISPLAY panel').



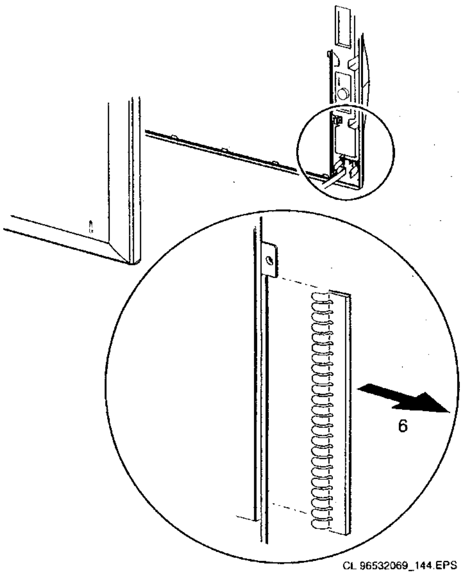
CL 96532069_143.EPS
120899

Figure 4-13

1. The LOUDSPEAKER can now be removed by disconnecting its cable and removing the 4 fixation screws at the top and bottom of the speakerbox. Be sure to remove the correct screws, otherwise the speaker system will be damaged (it is an airtight system).

4.2.3 Exchanging of the PDP.

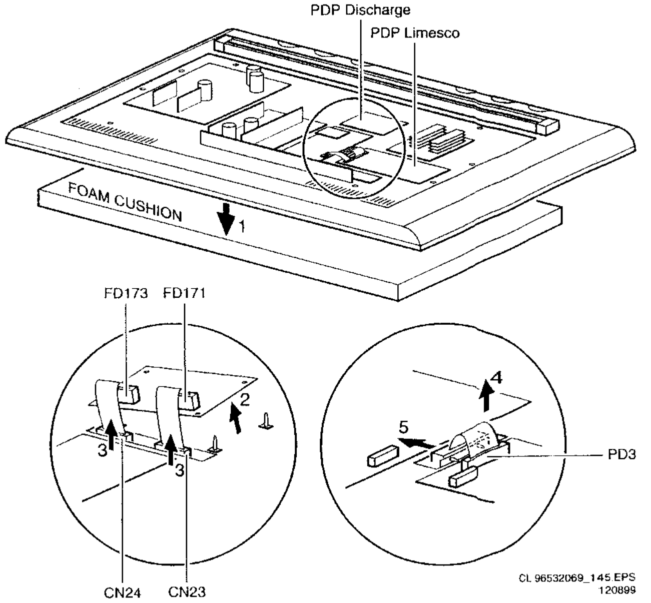
1. First unplug (remove Mains and VGA cable) the Display Box.
2. Place the rear side of the Display Box on a foam cushion (be sure the metal rear cover is mounted in order to prevent damaging of the electronic panels).
3. Remove front cover (for a description see Chapter 1.1.8 LED DISPLAY panel).
4. Now the GLASS PLATE can be removed by unscrewing all screws and removing all glass clips (for a description see Chapter 1.2.1. 'Exchanging of the GLASS PLATE').



CL 96532069_144.EPS
120899

Figure 4-14

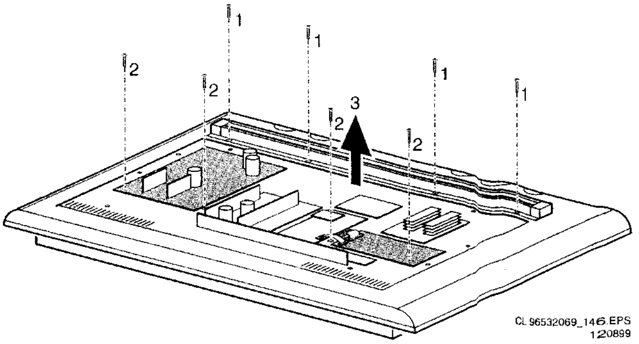
1. Remove all copper EMC SHIELDING springs mounted around the display [6].
2. Now flip the complete Display Box and place it with the Plasma Display down on a foam cushion. Be 100 % sure a large foam cushion is placed underneath the PDP, as it will drop about 10 mm after removing its fixation screws ! !
3. Disassemble metal rear cover (for a description see Chapter 1.1 'Introduction').



CL 96532069_145.EPS
120899

Figure 4-15

1. Disconnect the following cables:
   - Cables coming from connectors CN23 and CN24 of the PDP DISPLAY panel [3] (for easiest access lift the PDP DISCHARGE panel from its fixations [2]).
   - Flat cable on connector PD3 of the PDP LIMESCO panel [4]. Also remove the ferrite 'flat cable shield' completely by unlocking its fixations [5].



CL 96532069_146.EPS
120899

Figure 4-16

1. Now remove the 8 large screws which hold the PDP:
   - 4 screws are located at the top: they also hold the aluminium wall mount [1].
   - The other 4 are located at the bottom: the 2 outer screws are hidden behind panels. Therefor unscrew the VS/VA SUPPLY and the PDP-LIMESCO panel (grey panels) [2].
2. Lift encasing from PDP and replace PDP [3].

5. Service modes, fault finding and repair tips

For the FTV1.9, the Monitor can be used in two applications.

- A stand-alone configuration, a separate device which can also be sold and serviced separately.
- TV configuration, where the monitor is combined with the E-box.

The monitor, as a stand-alone unit, can be serviced by using a test pattern coming from the PDP-LIMESCO panel on the rear of the monitor itself or via a PC/laptop by using ComPair via the ComPair connector.

In this chapter the following paragraphs are included:

1. Test points
2. Dealer Service Tool (DST)
3. Service Modes
4. Error code buffer and error codes
5. The "blinking LED" procedure
6. Fault-finding tips
7. ComPair

5.1 Test points

The FTV1.9 chassis is equipped with test points in the service printing. These test points are referring to the functional blocks:

- A1-A2-A3, etc.: Test points for the Audio amplifier (A)
- C1-C2-C3, etc.: Test points for the AV control circuit (AVC)
- FD1-FD2-FD3, etc.: Test points for the VsVa supply (FD1-FD2) and the PDP discharge panel
- L1-L2-L3, etc.: Test points for the PDP LIMESCO (PD1-PD9)
- PR1-PR2-PR3, etc.: Test points for the Pre-conditioner (PR1-PR3)
- Y1-Y2-Y3, etc: Test points for the Y/C YUV monitor panel (UY1-YC4)

Measurements are performed under the following conditions: Video: colour bar signal; Audio: 3 kHz left, 1 kHz right

5.2 Dealer Service Tool (DST)

For easy installation and diagnosis the dealer service tool (DST) RC7150 can be used. When there is no picture (to access the error code buffer via the OSD), DST can enable the functionality of displaying the contents of the entire error code buffer via the blinking LED procedure, see also paragraph 5.5. The ordering number of the DST (RC7150) is 4822 218 21232.

5.2.1 Installation features for the dealer

The dealer can use the RC7150 for programming the TV-set with pre-sets. 10 Different program tables can be programmed into the DST via a GFL TV-set (downloading from the GFL to the DST; see GFL service manuals) or by the DST-I (DST interface; ordering code 4822 218 21277). For explanation of the installation features of the DST, the directions for use of the DST are recommended (For the FTV1.9 chassis, download code 4 should be used).

5.2.2 Diagnose features for service

FTV1.9 sets can be put in two service modes via the RC7150. These are the Service Default Mode (SDM) and the Service Alignment Mode (SAM).

5.3 Service Modes

Below described sequence is only valid for the "Monitor Only Configuration". When a Receiver box is connected to the Display Box (TV Configuration), please check chapter 5 in the Training Manual of the Receiver Box.

5.3.1 Service Default Mode (SDM)

The purpose of the SDM is:

- Provide a situation with predefined settings to get the same measurements as in this manual.
- Access to the error buffer via the blinking LED procedure.
- Inspection of the error buffer.
- Possibility to overrule software protections via the service pins (caution: override of software protections!).

Entering the SDM:

- By transmitting the "DEFAULT" command with the RC7150 Dealer Service Tool (this works both while the set is in normal operation mode or in the SAM).
- By pressing on a standard RC the following sequence 0, 6, 2, 5, 9, 6 followed by the "MENU" key.
- By short-circuiting the SDM pin on the µP panel.

In the SDM the following information is displayed on the screen:

F19DBC X.Y_12345 (1) LLLL (2) SDM (3)
ERR 02 01 14 ## ## ## ## ## ## ##

Explanation notes/references:

(1) Software identification of the main micro controller (F19DBC X.Y_12345)

- F19D is the chassis name for FTV1.9 display
- B is the region identification
- C is the language cluster
- X = (main version number)
- Y = (subversion number)
- ##### are 5 digits of the serial number

(2) "LLLL" Normal display operation in hours

(3) "SDM" To indicate that the TV set is in the service default mode

(4) "ERR 02 01 14 ## ## ## ## ## ## ## ##" This line shows the contents of the error buffer (max. 10 errors). The last error that occurred is displayed at the most left position. When less then 10 errors have occurred the rest of the line is empty. When the errorlist is empty " No errors" is displayed. No duplicate errors.

Exit the SDM:

Push the "STANDBY" button on the Remote Control.

The SDM sets the following pre-defined conditions:

- Volume level is set to 25% (of the maximum volume level).
- Linear Audio and Video settings are set to 50%.
- Colour temperature is set to normal.

The following functions are "overruled" in SDM since they interfere with diagnosing/repairing a set

- Video blanking.
- Slow demute.
- Anti-ageing.
- Automatic switch to "Standby" when H- and/or V-sync signals are lost.

All other controls operate normally.

5.3.2 Service Alignment Mode (SAM)

The purpose of the SAM is to align and or adjust settings. For recognition of the SAM, "SAM" is displayed at the top of the right side of the screen

Entering the SAM-menu:

- By pressing the "ALIGN" button on the RC7150 Dealer Service
- Standard RC sequence 062596 followed by the "OSD" button.

- By short-circuiting the SAM pin on the µP panel (Caution: override of software protections ! !)

In the SAM the following information is displayed on the screen:

```
-------------------------------------------------
F19DBC X.Y_12345              SAM
ERROR## ## ## ## ##
WHITE POINT
PDP TEST PATTERN        [ON/OFF]
STORE
RESET ERROR BUFFER
-------------------------------------------------
```

The menus and submenus

White point

The white point sub menu contains the following items:

- RED
- GREEN
- BLUE
- COLOUR TEMPERATURE

PDP Test pattern

By selecting this item, all OSD disappears from the screen. The screen now changes from light grey to dark grey in a slow regular rhythm. One can so easily check if all pixels of the monitor are correct.

Store

The change values are stored in the NVM.

Reset Error Buffer

This option will reset the error buffer.

Exit the SAM:
Push the "STANDBY" button on the Remote Control.
SAM menu control:
Menu items can be selected with the "UP" or "DOWN" key. Entry into the selected items (sub menus) is done by the "LEFT" or "RIGHT" key. The selected item will be highlighted. With the same "LEFT/RIGHT" keys, it is possible to increase/ decrease the value of the selected item.
Return to the former screen by pushing the "MENU" button. The item values are stored in NVM if the sub menu is left.

5.3.3 Customer Service Mode (CSM) Display

FTV1.9 monitors are equipped with the "Customer Service Mode" (CSM). CSM is a special service mode that can be activated and de-activated by the customer, upon request of the service technician/dealer during a telephone conversation in order to identify the status of the set. This CSM is a 'read only' mode, therefore modifications in this mode are not possible.

Entering the Customer Service Mode.

- By pressing on RC03333/01 the following sequence : Picture, sound, cursor up, cursor down, cursor left, cursor right followed by the "MUTE" button.

Exit the Customer Service Mode.

- pressing the "MENU" or any key on the Remote Control handset (except "P+" or "P-")
- switching off the TV set with the mains switch.

All settings that were changed at activation of CSM are set back to the initial values

The Customer Service Mode information screen

The following information is displayed on screen:

CUSTOMER SERVICE MENU

- Software version F19DBC X.Y_#####)
- Code 1: contains the last 5 error codes
- Code 2: contains the first 5 error codes with the last received error at the most left-hand side.
- Service unfriendly modes

5.4 Error code buffer and error-codes

The error code buffer contains all errors detected since the last time the buffer was erased. The buffer is written from left to right.
In case of non-intermittent faults, clear the error buffer before starting the repair to prevent that "old" error codes are present.
If possible check the entire content of the error buffers. In some situations an error code is only the RESULT of another error code (and not the actual cause).
Note: a fault in the protection detection circuitry can also lead to a protection
The error code buffer will be cleared in the following cases:

- exiting SDM or SAM with the "Standby" command on the remote control
- transmitting the commands "DIAGNOSE-9-9-OK" with the DST.

Leaving SDM or SAM with the mains switch does not reset the error buffer.
Examples:
ERROR: 0 0 0 0 0 : No errors detected
ERROR: 6 0 0 0 0 : Error code 6 is the last and only detected error
ERROR: 5 6 0 0 0 : Error code 6 was first detected and error code 5 is the last detected (newest) error

Error -nr	Type of Error	Possible defect/cause
1	+5V	+5V pin at µP is low.
2	8V6	8V6 pin at µP is low.
3	Fan_prot	Gives an indication that 1 or more FAN(s) does not function, or that 1 or more fan control circuits is defect
4	Over-temp_prot	Temperature at the heatsink of the VsVa supply or the Preconditioner is too high
5	DC_prot	Audio-amplifier IC, its supply or the Audio amplifier is defect
6	Over_voltage_prot	Vs or Va supply voltage is too high
7	Vrr	Powersupply of the display is not correct. Ignorance of the signal during startup by the software.
8	Power_OKE	Power supply or modules that uses this voltage. If this signal is NOT activated means that all supply voltages are available (exception Audio supply)
9	Blocked NVM IIC bus	NVM IIC bus is not correct
10	Blocked slow IIC bus	Slow IIC bus is not correct
11	TDA9860	No acknowledge of Audio controller
12	TDA4885	No acknowledge of Video controller
13	MC141585	No acknowledge of OSD Generator
14	uPD93687 GD-LBD	No acknowledge of Limesco

Error -nr	Type of Error	Possible defect/cause
15	PCF8574 AT	No acknowledge of I/O Expander
16	NVM	No acknowledge of NVM
17	Communication	Fault in the communication

5.5 The "blinking LED" procedure

The contents of the error buffer can also be made visible through the "blinking LED" procedure. This is especially useful when there is no picture. There are two methods:

- When the SDM is entered, the LED will blink the contents of the error-buffer. Error-codes = 10 are shown as followed. A long blink of 1second which is an indication of the decimal digit, followed by a pause, followed by n short blinks. When all the error-codes are displayed, the sequence is finished with a led display of about 3 seconds. The sequence starts again.
- With the DST all error codes in the error buffer can be made visible. Transmit the command: "DIAGNOSE x OK" where x is the position in the error buffer to be made visible x ranges from 1, (the last (actual) error) to 10 (the first error). The LED will operate in the same way as in the previous point, but now for the error code on position x.

Example:

Error code position 1 2 3 4 5

Error buffer: 12 9 5 0 0

- after entering SDM: 1 long blink of 1 sec. + 2 short blinks - pause - 9 short blinks - pause - 5 short blinks - pause - long blink of 3 sec. --etc.
- after transmitting "DIAGNOSE- 1- OK" with the DST: 1 long blink 2 short blinks - pause - 1 long blink + 2 short blinks - etc.
- after transmitting "DIAGNOSE- 2- OK" with the DST: blink (9x) - pause - blink (9x) - etc.
- after transmitting "DIAGNOSE- 3- OK" with the DST: blink (5x) - pause - blink (5x) - etc.
- after transmitting "DIAGNOSE- 4- OK" with the DST: nothing happens

5.6 Protection structure

5.6.1 General

The protection structure of the FTV1.9 D-box is shown at figure 5.5.

The FTV1.9 monitor has one microprocessor, which is situated on the AV-control panel and is supplied by the 5V standby supply. The microprocessor is even active when the set is switched to standby. The microprocessor controls the "supply-on" line which switches first relay 5680 and then relay 5690. In de standby-mode or the protection-mode the "supply-on" line is "low" and both relays are switched off. The preconditioner is disconnected from the mains.

The protections of the FTV1.9 monitor can be divided into 5 subgroups:

- Fan_prot
- Over_temp_prot
- DC_prot
- Over_voltage_prot
- Vrr

For the Fan-, Over_temp, DC and the Over_voltage protections the signals for the μP are latching, using the 5Vstby_switched for powering the circuits permanently. The μP has sufficient time for diagnosis and for storing the error-codes in the NVM. Vrr, which is an indication of the powersupply of the display is correct, is directly fed to the μP.

5.6.2 Signal line "PROTECTION STATUS" and errorcodes

When one of the protection mechanism is triggered, the 5Vstby-switched is connected via a saturated transistor and a pre-defined resistor to signal line "protection status", which is connected to the μP.

Signal line "protection status" is connected to ground via resistor R3378 and 3379. For each separate fault condition mechanism we get a pre-defined voltage at the μΠ.

This results in the following table

Protection-mode	Series resistor	Voltage at "protection-status" line	Error-code
None	-----	< 0.3V	none
Fan_prot	1KΩ	0.30V < Vprot < 1.90V	3
Vs or Va_prot	470Ω	1.90V < Vprot < 2.80V	4
Temp_prot	220Ω	2.80V < Vprot < 3.75V	5
DC-prot	68Ω	3.75V < Vprot < 4.7V	6
Vrr	------	------	7

Protection signal Vrr coming from the PDP, to indicate that the powersupply is ok or not ok ("1" or "0") is directly connected to the μP. Error-code 7 is stored in the NVM and the set is switched to standby.

When one of the protections is activated, the power supplies of the Vs and Va are shut down and the set is switched to standby.

5.6.3 Fan protection

When this protection is activated, the Va- and Vs power supply are shut down. The set is switched to the standby mode and error-code 3 is stored in the NVM.

The fan voltage is powered by 17V, but clamped to 12V to prevent damage. In order to be able to verify whether the fans are running, a fault detection circuit is implemented for each of the 6 fans. A running fan gives pulses in the same speed as the rotation of the blades. The circuit uses these pulses to trigger the discharge of an elcap. The elcap is continuously charged through a resistor.

Example : Capacitor C2319 is charged through R3356 and at every pulse discharged by T7322. When fan 6 is blocked, C2314 is charged via D6326 en triggers thyristor 7315, because C2319 is no longer discharged via T7322. The current now flows from the 5Vstby-switched via resistor 3383 and 3325 driving transistor T7321 into saturation. The voltage dividing of R3323 and resistor R3378 and 3379 now determine the voltage "protection status". (neglect the Vce of 0.2V of T7321).

Reset of the VsVa-supply.

Transistor T7339 is shorted now by the presence of the "protection status" signal. T7339 connects resistor R3376 and R3389 to ground, switching on T7338. Thyristor 7333 is now triggered, shorting signal PROTS to ground. To follow the signal flow, go to the right upper corner of schematic FD1. Connecting PROTS to ground, will start a current flow through opto-coupler diode 7103 and the opto-coupler transistor connects supply voltage Vcc2 to the fault input (pin 10) of IC 7101. When the voltage at pin 10 exceeds 1.0V, IC7101 stops oscillating. The Va-supply stops functioning.

To continue the signal flow, go to the right upper corner of schematic FD2. Connecting PROTS to ground also results in a current flow through the opto-coupler diode of 7003. The opto-coupler transistor connects supply voltage Vcc1 to the fault input (pin 10) of IC 7001. When the voltage at pin 10 exceeds 1.0V, IC7001 stops oscillating. The Vs-supply stops functioning.

5.6.4 Vs and Va protection

Va protection
When this protection is activated, the Va- and Vs power supply are shut down. The set is switched to the standby mode and error-code 4 is stored in the NVM.
When the Va-supply exceeds the 68V, regulator 7112 is triggered and will switch on T7113. Capacitor 2132 is charged via the 5Vstby-switched and will trigger thyristor 7114, which will switch on T7341. The voltage dividing of R3386 and resistor R3378 and 3379 now determine the voltage "protection status". (neglect the Vce of 0.2V of T7341). See schematic FD2.
The presence of the voltage at "protection status" line will eventually reset the VsVa-supply. For more info see subparagraph - Reset of the VsVa-supply.

Vs protection
When this protection is activated, the Vs power supply is shut down. The set is switched to the standby mode and error-code 4 is stored in the NVM.
When the Vs supply exceeds the 198V, regulator 7012 is triggered and will switch on T7016. Capacitor 2032 is charged via the 5Vstby-switched and will trigger thyristor 7013. Thyristor 7013 is fired and connects signal Aa to ground. To follow the signal flow, go to the right upper corner of schematic FD1. When signal Aa is shorted to ground, T7341 is switched on. The voltage dividing of R3386 and resistor R3378 and 3379 now determine the voltage "protection status". (neglect the Vce of 0.2V of T7341). See schematic FD2.
The presence of the voltage at "protection status" line will eventually reset the VsVa-supply. For more info see subparagraph - Reset of the VsVa-supply.

5.6.5 Temperature Protection

When this protection is activated, the Va- and Vs power supply are shut down. The set is switched to the standby mode and error-code 5 is stored in the NVM.
When the temperature of the heatsink on the Preconditioner panel or on one of the 2 heatsink on the VsVa panel exceeds the 110°C, the PTC resistance increases drastically. The voltage at pin 3 of IC7330 will drop and the output of 7330 will do the same. The current flow through opto-coupler diode 7331 results also in a current flow through the opto-coupler transistor and will trigger thyristor 7332. The fired thyristor switches transistor 7337 on. The voltage dividing of R3339 and resistor R3378 and 3379 now determine the voltage "protection status". (neglect the Vce of 0.2V of T7337).
The presence of the voltage at "protection status" line will eventually reset the VsVa-supply. For more info see subparagraph - Reset of the VsVa-supply.

5.6.6 DC Protection - Audio Amplifier

When this protection is activated, the Va- and Vs power supply are shut down. The set is switched to the standby mode and error-code 6 is stored in the NVM.
In case of a fault in the Audio amplifier or when a DC voltage appears on the speaker output, a signal called DCPROT is generated. See schematic FD2 - F7. In case of a fault, thyristor 7314 is triggered and switches on T7340. The voltage dividing of R3380 and resistor R3378 and 3379 now determine the voltage "protection status". (neglect the Vce of 0.2V of T7340).
The presence of the voltage at "protection status" line will eventually reset the VsVa-supply. For more info see subparagraph - Reset of the VsVa-supply.

5.6.7 Vrr - PDP supplies

Vrr is a logical signal ("high" in normal circumstances) that comes from the PDP. It's purpose is to trigger the switch-off of the Pre-conditioner supply in case Vrr becomes "low" , to trigger the shutdown of the VsVa supply and to initialise that error-code 7 is stored in the NVM.
When signal Vrr becomes "low", see FD1 - section F13, the output of IC7301-B becomes "high". This results in two actions. It will trigger thyristor 7302 and short signal PROTS to ground. This results eventually in a reset of the VsVa supply. Switching on T7371, which again switches on T7370 via the 5Vstby-switched supply. Signal-line "supply-on" is now grounded. This results in switching off relay 5680 and 5690, disconnecting the mains from the pre-conditioner. The standby supply (5Vstby-switched) is still functional. (See Fig. 5-5)

5.7 Fault finding tips

5.7.1 Pre-conditioner

The Pre-conditioner delivers the following output voltages:

- 5 VSTBY
- 5 VSTBY_switched
- 380 VDC
- Internal 12 VSTBY to supply the relay, which switches the mains input

To trouble shoot the pre-conditioner, first check the LED of the display-box.

- No red, green or orange LED indicates the absence of the +5Vstby_switched at the VsVa panel.

Check the +5Vstby_switched on pin 5 of connector PR08. If this voltage is present check the presence of this voltage at the VsVa-panel on pin 2 of connector FD04. See the wiring diagram of the monitor for more details.
If the voltage is not present, check R3508 and fuse 1500. In case of a defective R3508, check/replace item 7500, opto-coupler 7501, regulator 7502, and diode 6501 + 6502.
In case of an open circuit of fuse 1500, check/replace bridge 6500 and capacitor C2501.
If both component are alive, measure the voltage at pin 5 of IC7500 - Topswitch. If the waveforms resemble a burst-signal, the output is too heavy loaded. Check the output diode D6504 and capacitor C2508 of the 12VSB and diode 6505 and capacitor C2510 of the 5VSTBY.

- The red LED is blinking (+5Vstby is OK!), which is an indication of a protection.

Disconnect the VGA-cable between the E-box and the Monitor. Now the Monitor is operating as a stand-alone unit.
Switch the monitor via the DST, (command Default") or via the RC (special sequence) to the SDM.
Automatically the orange coloured LED of the monitor will blink the content of the error-buffer. If the sequence contains error-code 8, the cause could be a defective preconditioner. Error-code 8 is an indication that the +5V and/or the Vs/Va of the VsVa supply are not correct.
In case of error-code 4, switch OFF the set and check the temperature of the heatsink. In case of a high temperature of the heatsink, check MOSFET T7610 and the drive-circuit around T7640, T7641 and T7608.
In case of error-code 8, remove connector PR09 from the board. Short-circuit pin 2 of T7681 to ground, simulation of "SUPPLY_ON". (Caution - Protections overuled!!!)
Measure voltage at C2616. Is voltage 380Vdc?
Yes, the cause was a too heavy load/shortcircuit at the VsVa-panel.
No, measure the voltage at C2606/C2607. Is this voltage a DC-voltage of approx. 300V with a strong ripple at a mains-input of 230Vac? If NO, check if relay 5690 is activated via the transistors T7684 + T7690. Check also PTC's 3600, 3601 and 3602 at their resistor-value.

Voltage is present at C2606. Check/replace NFR 3663 and 3668, if one of them is an open-circuit. In case R3663 is an open circuit, check/replace diode 6660, 6661 and capacitor C2664 plus IC 7660. If IC7660 is defect, check/replace IC 7650 and C2262. In case of an open circuit of NFR 3668, replace IC 7650.
NFR 3663 and NFR 3668 are not defect. Measure waveform at base of T7608. Is a square waveform present at gate of T7610? Check/replace MOSFET T7610 and the drive-circuit around T7640, T7641 and T7608.

5.7.2 VsVa-supply

The red LED is blinking (+5Vstby is OK!), which is an indication of a protection.
Disconnect the VGA-cable between the E-box and the Monitor. The Monitor is now operating as a stand-alone unit.
Switch the monitor via the DST, (command "Default") or via the RC (special sequence) to the SDM.

- Error-code 1, check the +5V supply

Check fuse 1103. If the fuse is an open circuit, check/replace IC 7201. If fuse 1103 is OK, check the presence of the 17V. I this voltage is not present check fuse 1102 + 1104 and D6121 + D6122. If the 17V is present, then remove connector FD05. The reason could be a too heavy load or a short-circuit of the +5V supply. If after disconnection of connector FD05 the set still goes into protection, check D6203, NFR 3205 and the circuit around IC 7201.

- Error-code 2, check the 8V6 supply

Check regulator IC 7203, NFR 3099 and D6204.

- Error-code 8 there is something wrong with the POWER_OKE signal. When the POWER_OKE signal is low, the Vs and Va and the +5V are available.

Measure the voltage Va at C2120. Is the voltage between 55V and 65V? If not check fuse 1105 and D6120. If both components are OK, the cause could be a too heavy load.
Measure the voltage Vs at C2020. Is the voltage between 165V and 185V? If not check D6020. If D6020 is OK, the cause could be a too heavy load.
If both voltage are not present, check fuse 1004 at the input. If fuse 1004 is an open circuit, check the MOSFET's 7005 and 7006 for a short-circuit. In case of short-circuit use the repair-kit.
If fuse 1004 is OK, check the voltage at pin 15 of IC 7001. Is the voltage at pin 15 approx. 16-17V? If NO, check NFR 3002 and D6002 + D6030. If YES, check the waveforms FD49 and FD50 at pin 14 and 12. If they are present, check pulse transformer 5001 and the driver-circuits around MOSFET 7005 and 7006. If the waveforms FD49 and FD50 are not present, replace IC7001.

- Error-code 5, check the audio-supply or the Audio amplifier IC.

Check/replace fuse 1201 + 1202 and diode 6201 + 6202. If the components are OK, check the audio-amplifier IC.

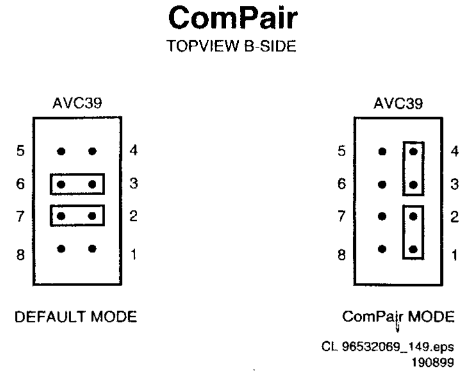
- Error-code 6, check the Vs and/or the Va supply voltage.

The regulation-circuit of one of these voltages is not working correctly.
For the Va supply check opto-coupler 7102 and IC 7110.
For the Vs supply check opto-coupler 7002 and IC 7010

5.8 ComPair

5.8.1 ComPair mode

The monitor, as a stand-alone unit, can be diagnosed via a PC/ laptop by using ComPair via the ComPair connector. Before connecting the ComPair-cable at the AV Control panel on connector AVC34, the monitor must be put in the "ComPair - Mode ". This can be done by changing the jumpers at connector AVC39. Connector AVC39 is situated under the uP panel.
The figure below shows how to do it.



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190899

Figure 5-1

After switching ON the set, the red LED will blink as an indication that the monitor is in the ComPair mode.

5.8.2 Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the DST service remote control allowing faster and more accurate diagnostics. ComPair has three big advantages:

- ComPair helps you to quickly get an understanding how to repair the FTV1.9 in short time by guiding you step by step through the repair procedures.
- ComPair allows very detailed diagnostics (on I2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I2C commands yourself; ComPair takes care of this.
- ComPair speeds up the repair time since it can automatically communicate with the FTV1.9 (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the SearchMan FTV1.9 electronic manual, schematics and PCBs are only a mouse-click away.

ComPair consists of a Windows based faultfinding program and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial or RS232 cable. In case of the FTV1.9 chassis, the ComPair interface box and the FTV1.9 communicate via an I2C cable (bi-directional) The ComPair fault finding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in 2 ways:

1. Communication to the television (automatic)
2. Asking questions to you (manually)

ComPair combines this information with the repair information in its database to find out how to repair the FTV1.9.

Automatic information gathering
Reading out the error buffer, ComPair can automatically read out the contents of the entire error buffer.
Diagnosis on I2C level. ComPair can access the I2C bus of the television. ComPair can send and receive I2C commands to the micro controller of the television. In this way it is possible for ComPair to communicate (read and write) to devices on the I2C busses of the FTV1.9.

Manual information gathering
Automatic diagnosis is only possible if the micro controller of the television is working correctly and only to a certain extend. When this is not the case, ComPair will guide you through the faultfinding tree by asking you questions and showing you examples. You can answer by clicking on a link (e.g. text or an

waveform pictures) that will bring you to the next step in the faultfinding process.
A question could be: Do you see snow? (Click on the correct answer)
YES / NO
An example can be: Measure testpoint I7 and click on the correct oscillogram you see on the oscilloscope

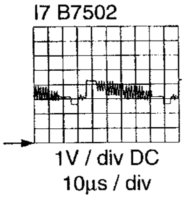


Figure 5-2

By a combination of automatic diagnostics and an interactive question/answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Additional features
Beside fault finding, ComPair provides some additional features like:

- Uploading/downloading of pre-sets
- Managing of pre-set lists
- Emulation of the Dealer Service Tool

5.8.3 Searchman (Electronic Service Manual)

If both ComPair and SearchMan are installed, all the schematics and PCB's of the faulty set are available when clicking on the hyper-link of a schematic or a PCB in ComPair.
Example : Measure the DC-voltage on capacitor C2568 (Schematic/Panel) at the Monocarrier.
Clicking on the PCB hyper-link, automatically shows the PCB with a highlighted capacitor C2568. clicking on the schematic hyper-link, automatically shows the position of a highlighted capacitor C2568 at the schematic.

5.8.4 Connecting the ComPair interface

The ComPair Browser software should be installed and setup before connecting ComPair to the FTV1.9. (See the ComPair Browser Quick Reference Card for installation instructions):

1. Connect the RS232 interface cable to a free serial (COMM) port on the PC and the ComPair interface PC connector (connector marked with "PC").
2. Place the ComPair interface box straight in front of the television with the infrared window (marked "IR") directed to the television LED. The distance between ComPair interface and television should be between 0.3 and 0.6 meter. (Note: make sure that (also) in the service position, the ComPair interface infra red window is pointed to the standby LED of the television set (no objects should block the infra red beam)
3. Connect the mains adapter to the connector marked "POWER 9V DC" on the ComPair interface
4. Switch the ComPair interface OFF
5. Switch the television set OFF with the mains switch
6. Remove the rear cover of the television set
7. Connect the interface cable (4822 727 21641) to the connector on the rear side of the ComPair interface that is marked "I2C" (See Figure 5-4)
8. Connect the other end of the interface cable to the ComPair connector AVC34 (0334) at the right/bottom side of the AV-Control panel.
9. Plug the mains adapter in the mains outlet and switch ON the interface. The green and red LED's light up together. The red LED extinguishes after approx. 1 second (the green LED remains lit).
10. Start-up Compair and select "File" menu, "Open...:; select "FTV1.9 Fault finding" and click "OK"
11. Click on the icon (Fig. 5-3) to switch ON the communication mode (the red LED on the Compair interface wil light up)
12. Switch on the television set with the mains switch
13. When the set is in standby. Click on "Start-up in ComPair mode from standby" in the ComPair FTV1.9 fault finding tree, otherwise continue.

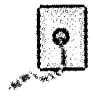
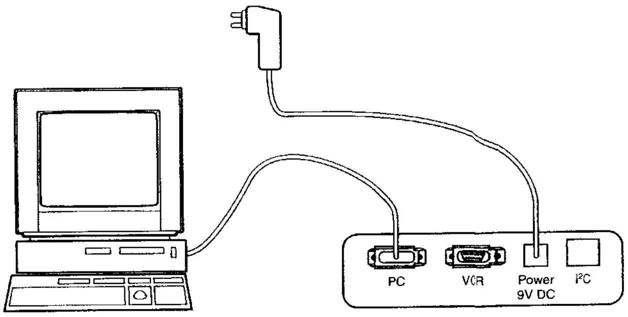


Figure 5-3



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050898

Figure 5-4

The set has now started up in ComPair mode. Follow the instruction in the FTV1.9 fault finding tree to diagnose the set. Note that the OSD works but that the actual user control is disabled

5.8.5 Preset installation

Presets can be installed in 2 ways with the FTV1.9.

- Via infra red
  - only sending TO the television
  - the rearcover does NOT have to be removed

Click on "File" "Open" and select "TV - use ComPair as DST" to use infra red

- Via cable
  - sending TO the television and reading FROM the television
  - the rearcover has to be removed

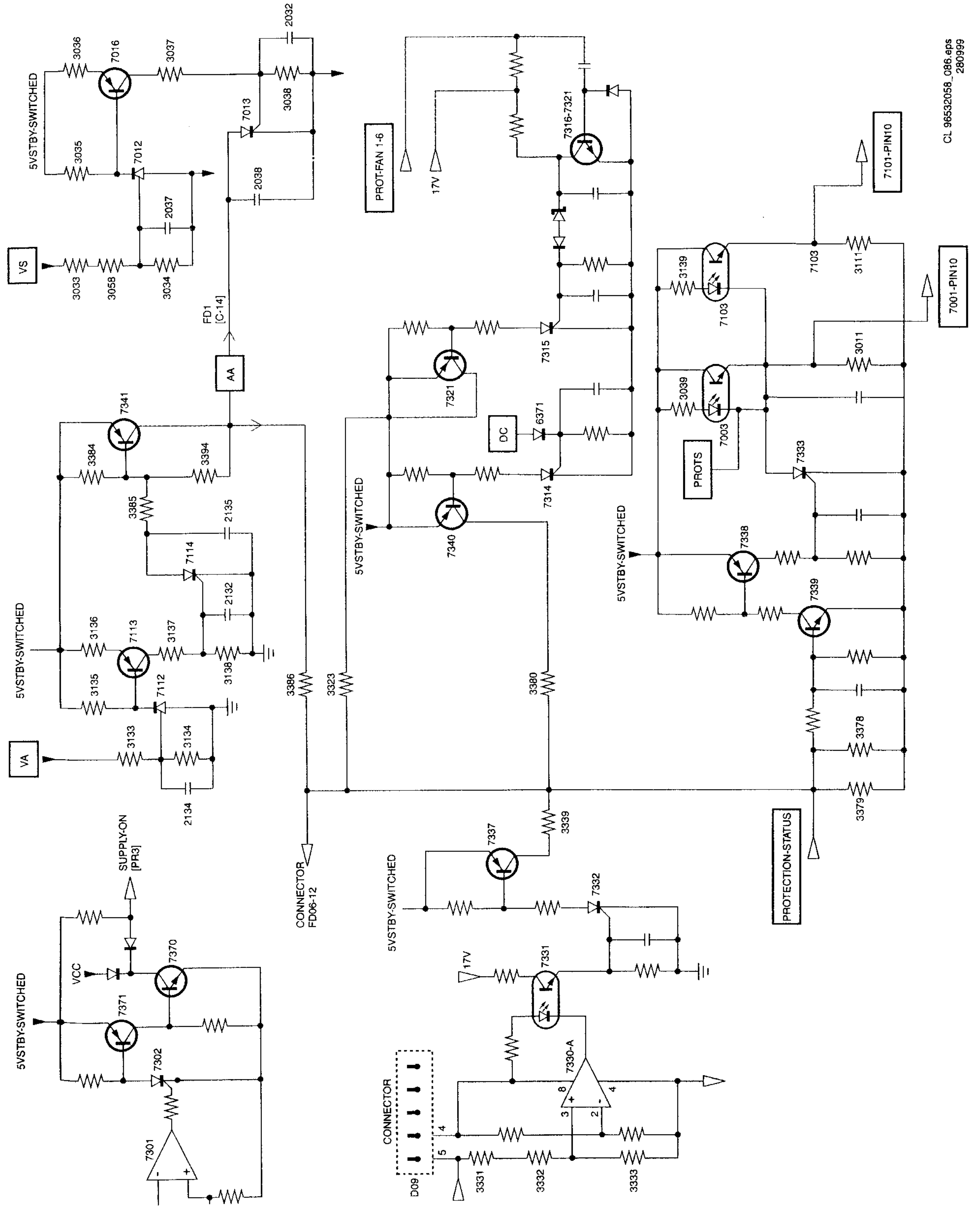
Click on "File" "Open" and select "FTV1.9 fault finding" to use the cable
Presets can be installed via menu "Tools", "Installation", "Presets".

5.8.6 Ordering ComPair

ComPair order codes:

- Starterkit ComPair + SearchMan software + ComPair interface (excluding transformer): 4822 727 21629
- ComPair interface (excluding transformer) : 4822 727 21631
- ComPair transformer (continental) Europe : 4822 727 21632
- ComPair transformer United Kingdom: 4822 727 21633
- Starterkit ComPair software: 4822 727 21634

- Starterkit SearchMan software: 4822 727 21635
- Starterkit ComPair + SearchMan software: 4822 727 21636
- ComPair CD (update): 4822 727 21637
- SearchMan CD (update): 4822 727 21638
- ComPair interface cable (for FTV1.9): 4822 727 21641


5VSTBY-SWITCHED
VCC
SUPPLY-ON
[PR3]
7301
7302
7371
7370
VA
3133
3134
2134
3135
3136
7113
7112
3137
3138
2132
7114
2135
3385
3384
3394
7341
AA
FD1
[C-14]
VS
3033
3058
3034
2037
3035
3036
7016
7012
3037
2038
7013
3038
2032
CONNECTOR
FD06-12
3386
3323
3380
3339
PROT-FAN 1-6
17V
7340
7321
DC
6371
7314
7315
7316-7321
CONNECTOR
D09
5
4
3331
3332
3333
7330-A
3
2
8
4
7331
7337
7332
PROTECTION-STATUS
3379
3378
7339
7338
PROTS
7003
3039
7103
3139
7333
3011
3111
7001-PIN10
7101-PIN10
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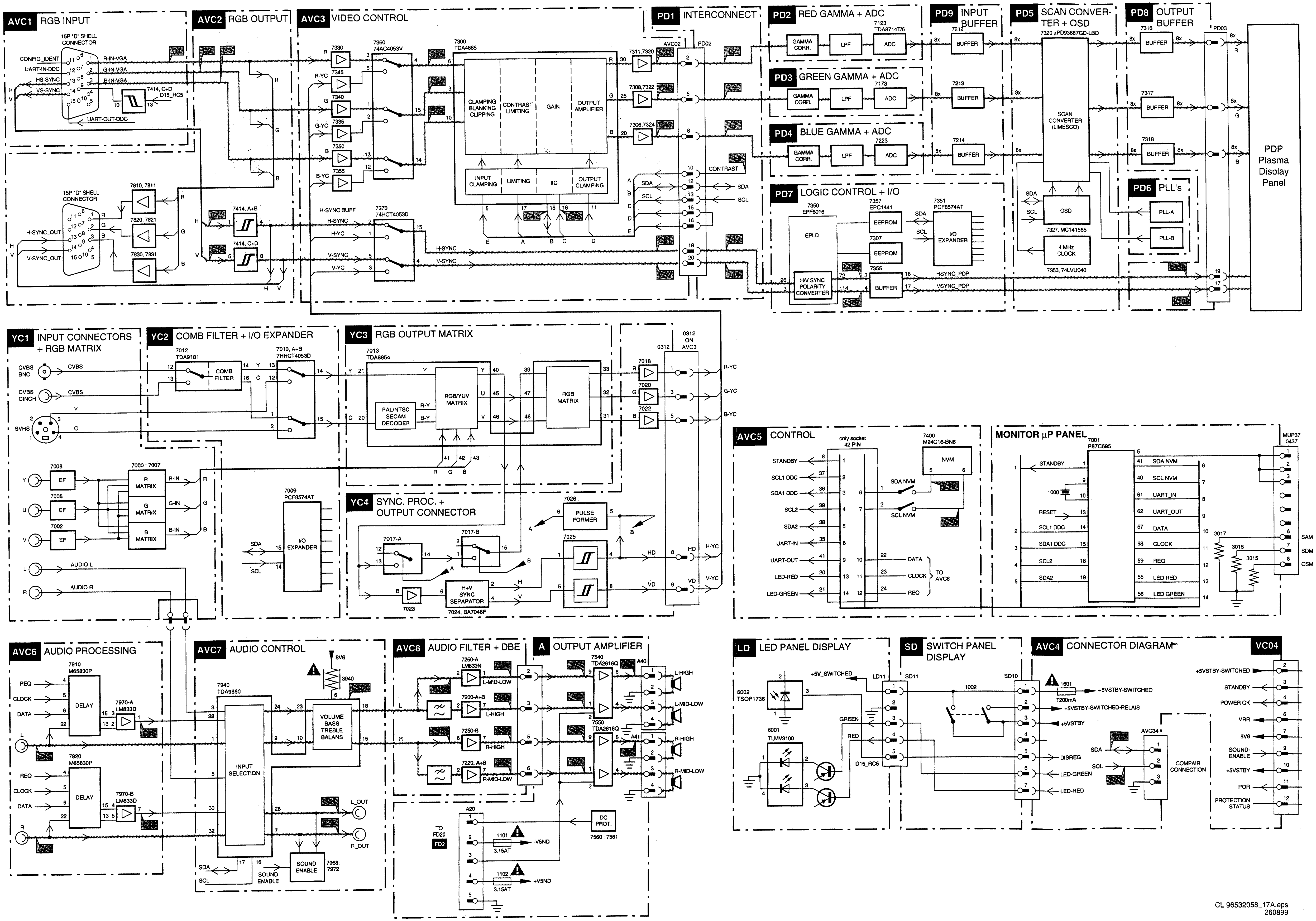
280999

Figure 5-5

6. Block diagrams

Block diagram (Part 1)


AVC1 RGB INPUT
15P "D" SHELL CONNECTOR
CONFIG_IDENT
UART-IN-DDC
HS-SYNC
VS-SYNC
UART-OUT-DDC
R-IN-VGA
G-IN-VGA
B-IN-VGA
7414, C+D
D15_RC5
H-SYNC_OUT
V-SYNC_OUT
7810, 7811
7820, 7821
7830, 7831
AVC2 RGB OUTPUT
7414, A+B
7414, C+D
AVC3 VIDEO CONTROL
7330
7345
7340
7335
7350
7355
7360 74AC4053V
7300 TDA4885
CLAMPING BLANKING CLIPPING
CONTRAST LIMITING
GAIN
OUTPUT AMPLIFIER
INPUT CLAMPING
LIMITING
IIC
OUTPUT CLAMPING
H-SYNC BUFF
7370 74HCT4053D
H-SYNC
V-SYNC
R-YC
G-YC
B-YC
H-YC
V-YC
7311,7320
7308,7322
7306,7324
CONTRAST
SDA
SCL
PD1 INTERCONNECT
AVC02
PD02
PD2 RED GAMMA + ADC
7123 TDA8714T/6
GAMMA CORR.
LPF
ADC
PD3 GREEN GAMMA + ADC
7173
PD4 BLUE GAMMA + ADC
7223
PD9 INPUT BUFFER
7212
7213
7214
BUFFER
PD5 SCAN CONVERTER + OSD
7320 µPD93687GD-LBD
SCAN CONVERTER (LIMESCO)
OSD
7327, MC141585
4 MHz CLOCK
7353, 74LV0040
PD8 OUTPUT BUFFER
7316
7317
7318
PD03
PD6 PLL's
PLL-A
PLL-B
PD7 LOGIC CONTROL + I/O
7350 EPF6016
EPLD
7357 EPC1441
EEPROM
7307
7351 PCF8574AT
I/O EXPANDER
H/V SYNC POLARITY CONVERTER
7355
BUFFER
HSYNC_PDP
VSYNC_PDP
PDP Plasma Display Panel
YC1 INPUT CONNECTORS + RGB MATRIX
CVBS BNC
CVBS CINCH
SVHS
7008
7005
7002
EF
7000 : 7007
R MATRIX
G MATRIX
B MATRIX
R-IN
G-IN
B-IN
AUDIO L
AUDIO R
YC2 COMB FILTER + I/O EXPANDER
7012 TDA9181
COMB FILTER
7010, A+B 7HHCT4053D
7009 PCF8574AT
I/O EXPANDER
YC3 RGB OUTPUT MATRIX
7013 TDA8854
PAL/NTSC SECAM DECODER
RGB/YUV MATRIX
RGB MATRIX
7018
7020
7022
0312 ON AVC3
YC4 SYNC. PROC. + OUTPUT CONNECTOR
7017-A
7017-B
7023
H+V SYNC SEPARATOR
7024, BA7046F
7026
PULSE FORMER
7025
HD
VD
AVC5 CONTROL
only socket 42 PIN
7400 M24C16-BN6
NVM
STANDBY
SCL1 DDC
SDA1 DDC
SCL2
SDA2
UART-IN
UART-OUT
LED-RED
LED-GREEN
SDA NVM
SCL NVM
DATA
CLOCK
REQ
TO AVC6
MONITOR µP PANEL
7001 P87C695
MUP37 0437
RESET
SDA NVM
SCL NVM
UART_IN
UART_OUT
LED RED
LED GREEN
3017
3016
3015
SAM
SDM
CSM
AVC6 AUDIO PROCESSING
7910 M65830P
7920 M65830P
DELAY
7970-A LM833D
7970-B LM833D
AVC7 AUDIO CONTROL
7940 TDA9860
INPUT SELECTION
VOLUME BASS TREBLE BALANS
8V6
3940
SOUND ENABLE
7968: 7972
L_OUT
R_OUT
AVC8 AUDIO FILTER + DBE
7250-A LM833N
7200-A+B
7250-B
7220, A+B
L-MID-LOW
L-HIGH
R-HIGH
R-MID-LOW
A OUTPUT AMPLIFIER
7540 TDA2616Q
7550 TDA2616Q
A40
A41
DC PROT.
7560 : 7561
A20
TO FD20
FD2
1101
1102
3.15AT
-V5ND
+V5ND
LD LED PANEL DISPLAY
6002 TSOP1736
6001 TLMV3100
+5V_SWITCHED
GREEN
RED
D15_RC5
LD11
SD SWITCH PANEL DISPLAY
SD11
1002
SD10
AVC4 CONNECTOR DIAGRAM
1601
T200mA
+5VSTBY-SWITCHED
+5VSTBY-SWITCHED-RELAIS
+5VSTBY
DISREG
LED-GREEN
LED-RED
AVC34
COMPAIR CONNECTION
VC04
STANDBY
POWER OK
VRR
8V6
SOUND-ENABLE
+5VSTBY
POR
PROTECTION STATUS

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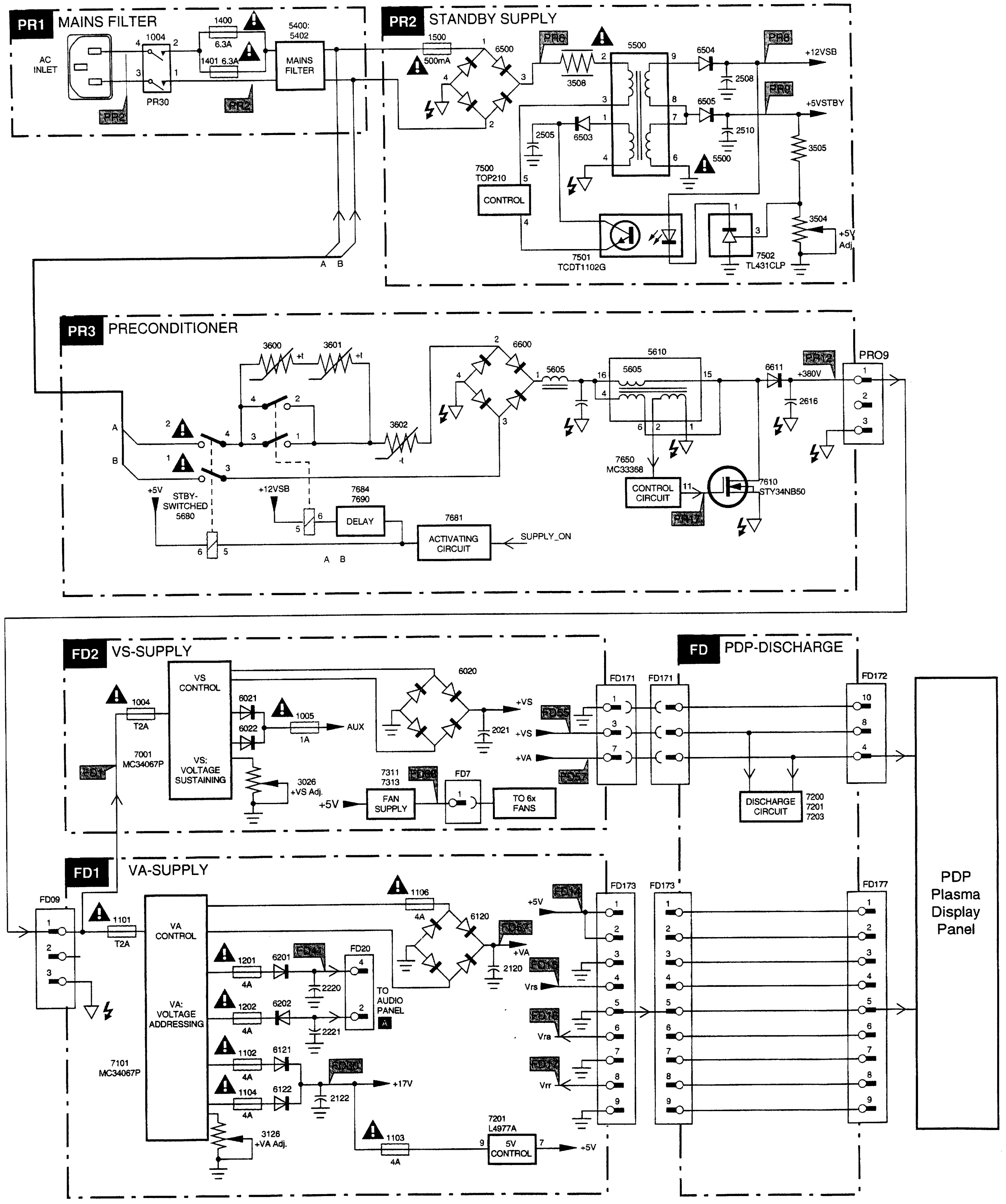
260899

Block diagram (Part 2)


PR1 MAINS FILTER
AC INLET
1004
PR30
1400 6.3A
1401 6.3A
5400: 5402
MAINS FILTER
PR2
PR2 STANDBY SUPPLY
1500 500mA
6500
3508
5500
6504
2508
+12VSB
6505
2510
+5VSTBY
2505
6503
3505
5500
7500 TOP210
CONTROL
7501 TCDT1102G
7502 TL431CLP
3504
+5V Adj.
PR3 PRECONDITIONER
3600
3601
3602
6600
5605
5610
6611
+380V
2616
PRO9
STBY-SWITCHED 5680
+12VSB
7684 7690
DELAY
7681
ACTIVATING CIRCUIT
SUPPLY_ON
7650 MC33368
CONTROL CIRCUIT
7610 STY34NB50
FD2 VS-SUPPLY
1004 T2A
VS CONTROL
VS: VOLTAGE SUSTAINING
7001 MC34067P
6021
6022
1005 1A
AUX
6020
2021
+VS
+VA
3026 +VS Adj.
+5V
7311 7313
FAN SUPPLY
FD7
TO 6x FANS
FD PDP-DISCHARGE
FD171
FD172
DISCHARGE CIRCUIT
7200 7201 7203
FD1 VA-SUPPLY
FD09
1101 T2A
VA CONTROL
VA: VOLTAGE ADDRESSING
7101 MC34067P
1201 4A
6201
1202 4A
6202
2220
2221
FD20
TO AUDIO PANEL
A
1102 4A
6121
1104 4A
6122
2122
+17V
1106 4A
6120
2120
+5V
Vrs
Vra
Vrr
3126 +VA Adj.
1103 4A
7201 L4977A
5V CONTROL
FD173
FD177
PDP Plasma Display Panel

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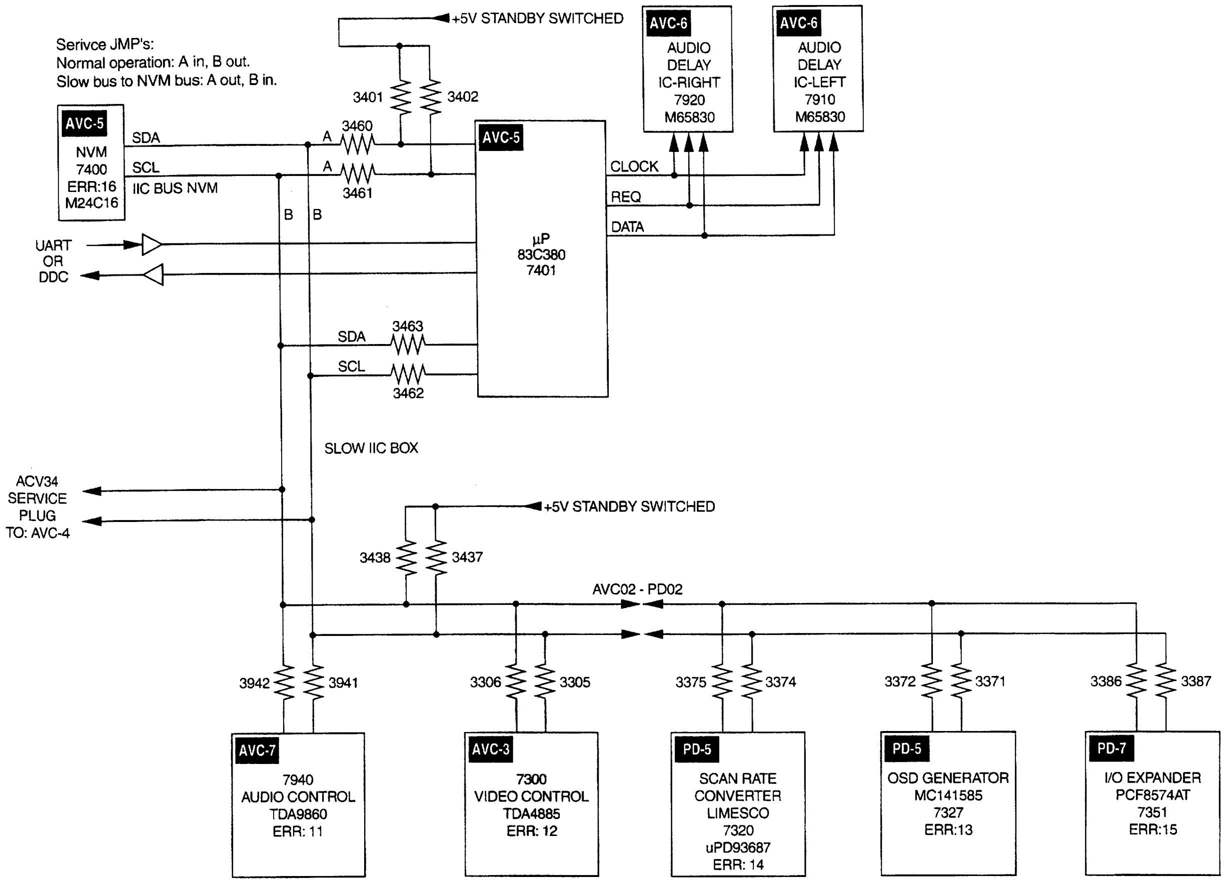
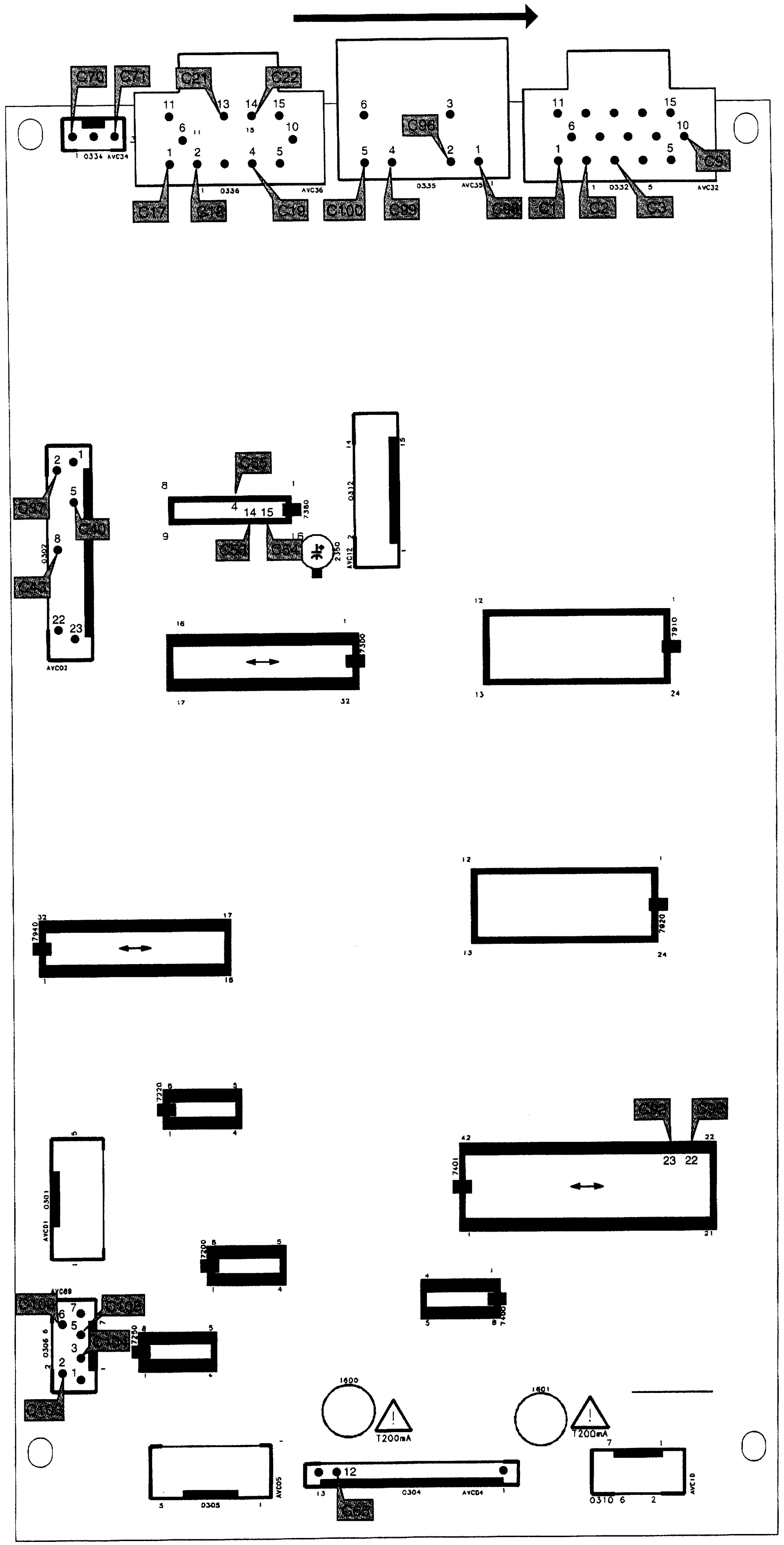
280999

I2C bus interconnection diagram


+5V STANDBY SWITCHED
Serivce JMP's:
Normal operation: A in, B out.
Slow bus to NVM bus: A out, B in.
AVC-5
NVM 7400 ERR:16 M24C16
SDA
SCL
IIC BUS NVM
3401
3402
3460
3461
A
B
AVC-5
µP 83C380 7401
AVC-6 AUDIO DELAY IC-RIGHT 7920 M65830
AVC-6 AUDIO DELAY IC-LEFT 7910 M65830
CLOCK
REQ
DATA
UART OR DDC
3463
3462
SLOW IIC BOX
ACV34 SERVICE PLUG TO: AVC-4
+5V STANDBY SWITCHED
3438
3437
AVC02 - PD02
3942
3941
3306
3305
3375
3374
3372
3371
3386
3387
AVC-7 7940 AUDIO CONTROL TDA9860 ERR: 11
AVC-3 7300 VIDEO CONTROL TDA4885 ERR: 12
PD-5 SCAN RATE CONVERTER LIMESCO 7320 uPD93687 ERR: 14
PD-5 OSD GENERATOR MC141585 7327 ERR:13
PD-7 I/O EXPANDER PCF8574AT 7351 ERR:15

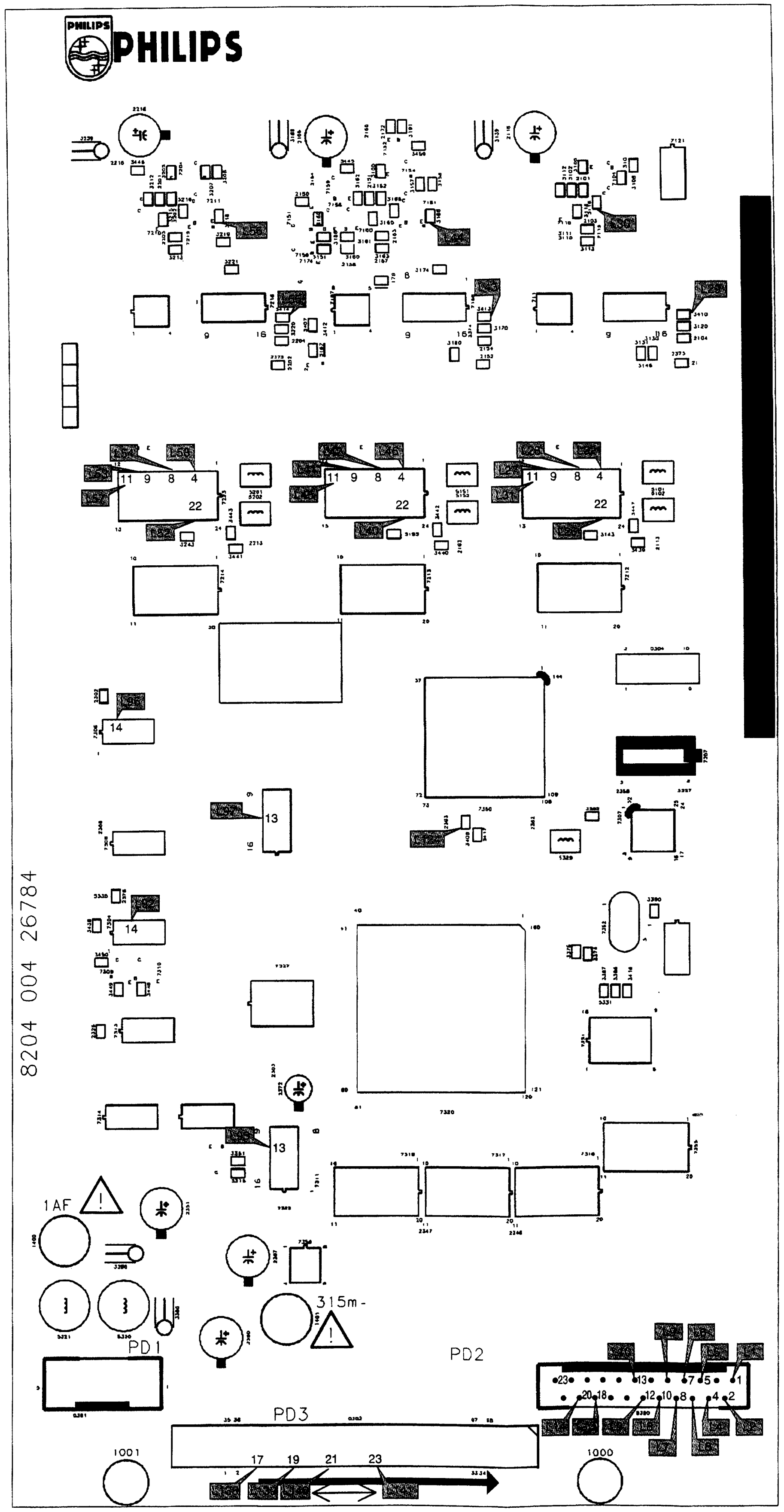
CL96532058_002
220999

Testpoint overview AV Control



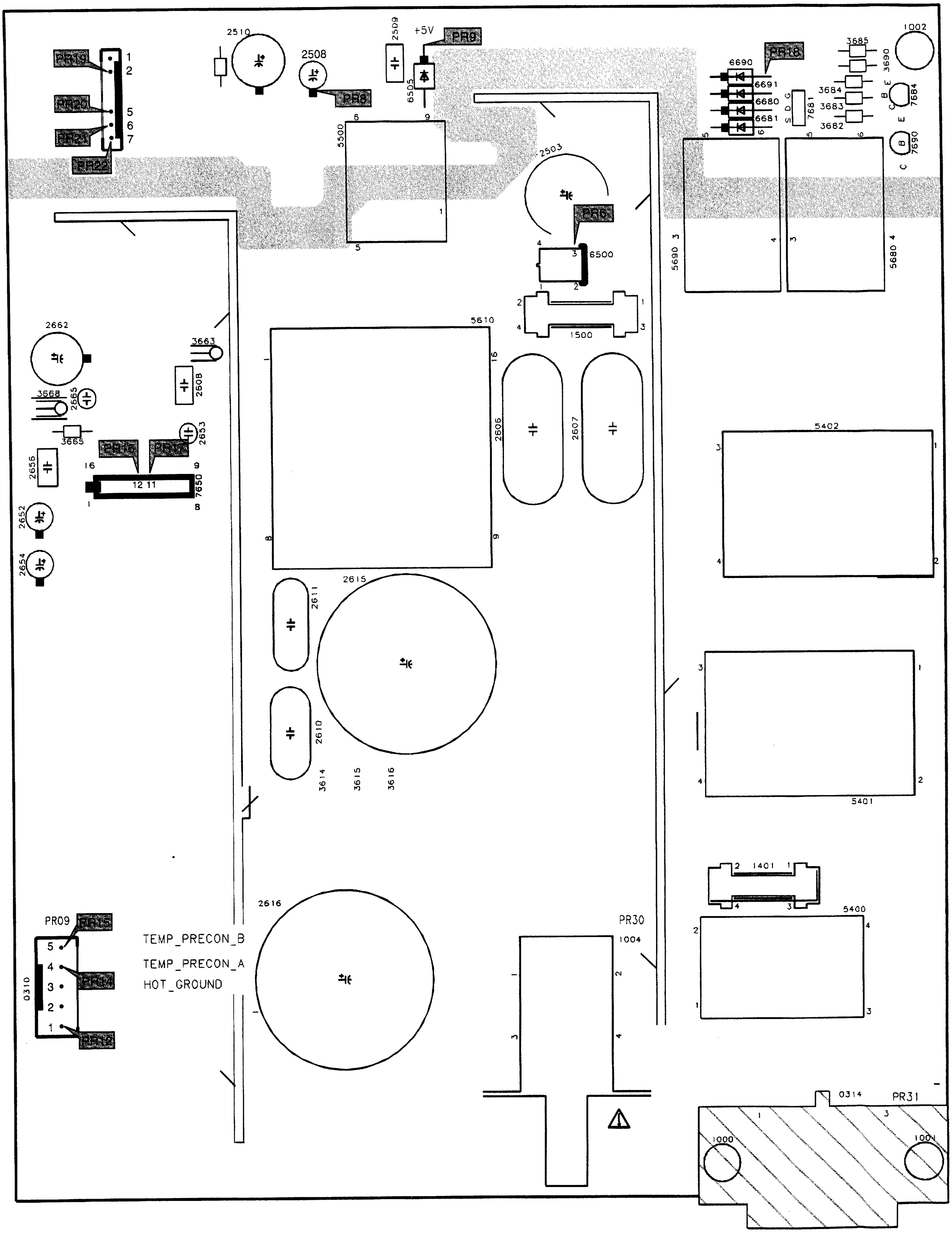
CL 96532058_019.EPS
240899

Testpoint overview Limesco


PHILIPS
8204 004 26784
1AF
315m-
PD1
PD2
PD3

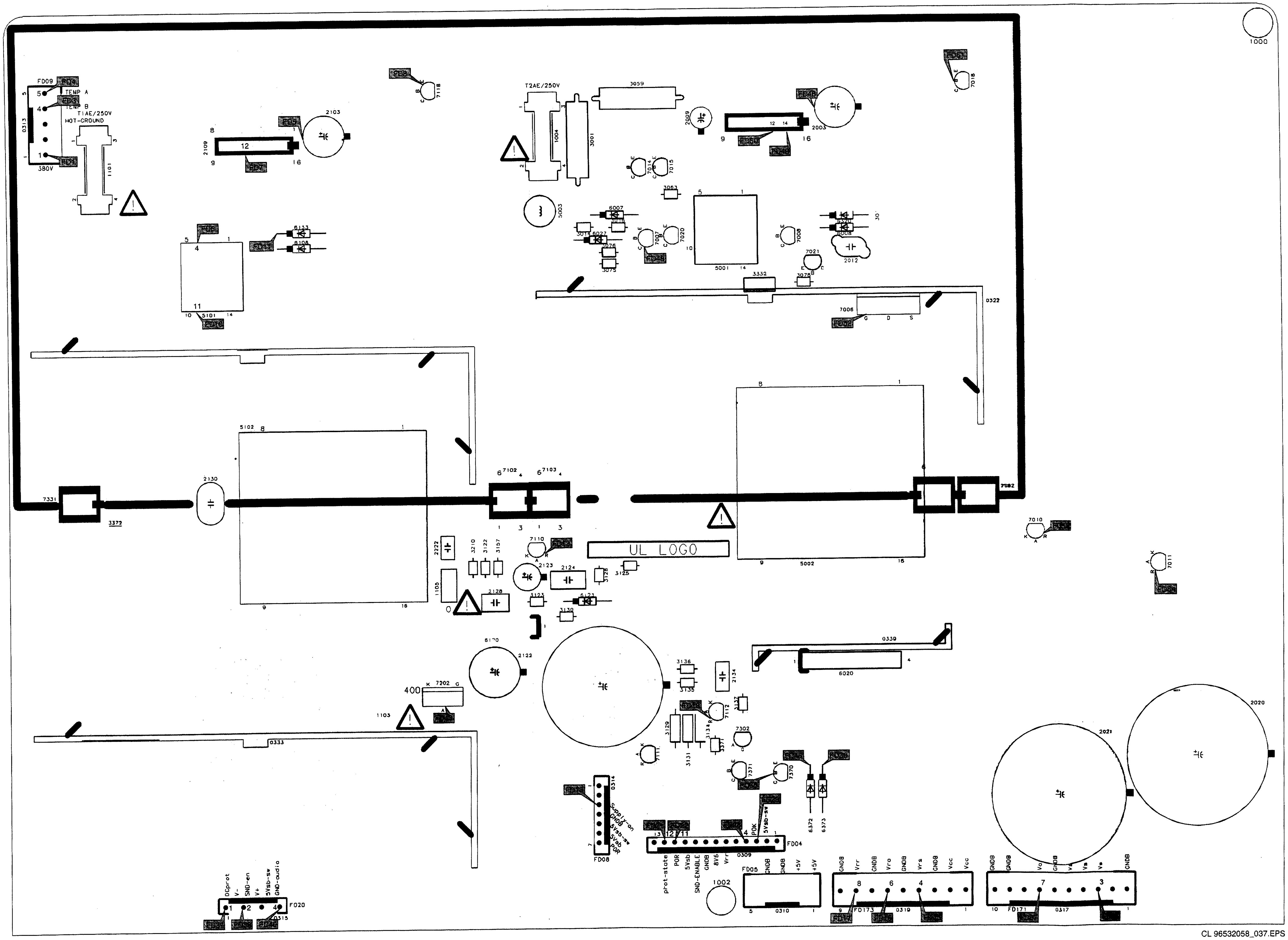
CL 96532058_020.EPS
270899

Testpoint overview Preconditioner

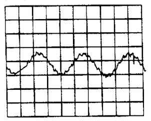

PR19
PR20
PR21
PR22
2510
2508
PR8
2509
+5V
PR9
6505
5500
PR18
6690
6691
6680
6681
S D G
7681
3685
3690
3684
3683
3682
1002
B E C
7684
E B C
7690
2503
PR6
6500
1500
5690
5680
5610
2662
3663
2608
3668
2665
3665
2653
PR16
PR17
12 11
7650
2656
2652
2654
2606
2607
5402
2611
2615
2610
3614
3615
3616
5401
1401
5400
PR09
PR15
PR14
PR12
0310
TEMP_PRECON_B
TEMP_PRECON_A
HOT_GROUND
2616
PR30
1004
0314
PR31
1000
1001

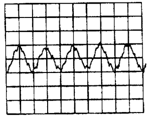
CL 965320058_021.EPS
270899

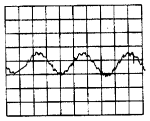
Testpoint overview VsVa Supply

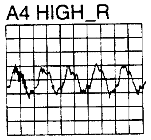

1000
FD09
TEMP A
TEMP B
T1AE/250V
HOT-GROUND
380V
0313
1101
2103
2109
12
16
7118
T2AE/250V
3059
1004
3001
2009
2003
7018
7014
7015
3063
5003
6007
3076
3013
6027
3075
7007
7020
5001
7008
7021
2012
3332
3078
0322
7006
G
D
S
5101
6133
6108
5102
2130
7331
3372
6 7102 4
6 7103 4
7082
5002
UL LOGO
7010
7011
7110
2222
3210
3122
3157
2123
2124
3128
3125
1105
2128
3123
6123
3130
6120
2122
0339
6020
400
7202
1103
2134
3136
3135
3132
7112
7302
3129
3131
3134
3371
7111
7371
7370
6372
6373
0333
2021
2020
0314
Supply-on
GNDB
5Vsb-sw
5Vsb
POR
FD08
FD04
0309
prot-state
POR
5Vsb
SND-ENABLE
GNDB
8V6
Vrr
POK
5Vsb-sw
1002
FD05
GNDB
GNDB
+5V
+5V
0310
GNDB
Vrr
GNDB
Vro
GNDB
Vrs
GNDB
Vcc
Vcc
FD173
0319
GNDB
GNDB
Vo
GNDB
Vs
Vs
Va
GNDB
FD171
0317
DCprot
V-
SND-en
V+
5Vsb-sw
GND-audio
FD20
0315

Oscillograms

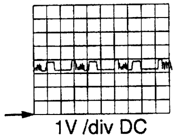

A1 PIN4-7540
0.1V / div
0.2ms / div

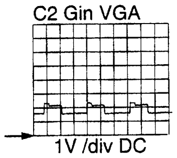

A2 HIGH_L
50mV / div
0.2ms / div

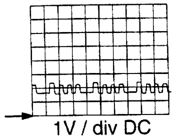

A3
0.1V / div
0.2ms / div


A4 HIGH_R
50mV / div
0.5ms / div

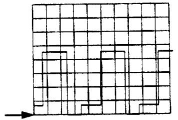
A11 +4V DC
A12 +4V DC
A14 +4V DC
A15 +4V DC

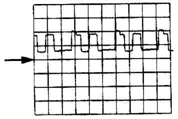

C1 Rin VGA
1V /div DC
10µs / div

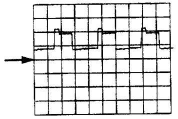

C2 Gin VGA
1V /div DC
10µs / div

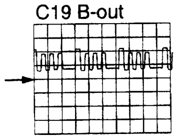

C3 Bin VGA
1V / div DC
10µs / div

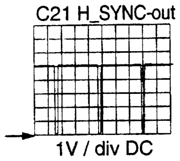
C7 +5V DC

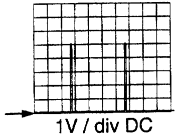

C9 CONFIG_IDENT
1V / div DC
0.1s / div

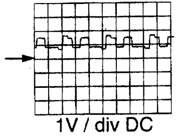

C17 R-out
1V / div DC
10µs / div

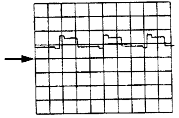

C18 G-out
1V / div DC
10µs / div

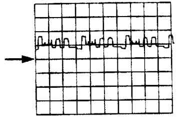

C19 B-out
1V / div DC
10µs / div

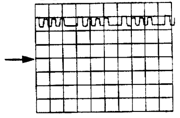

C21 H_SYNC-out
1V / div DC
10µs / div

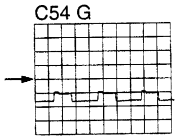

C22 V_SYNC-out
1V / div DC
5ms / div

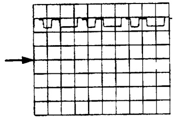

C37 R VIDEO
1V / div DC
10µs / div

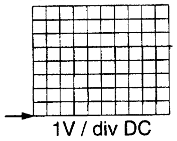

C40 G VIDEO
1V / div DC
10µs / div

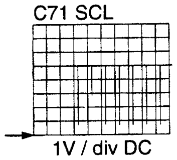

C43 B VIDEO
1V / div DC
10µs / div

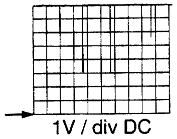

C53 B
1V / div DC
10µs / div

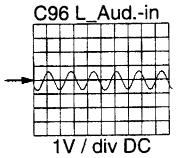

C54 G
1V / div DC
10µs / div

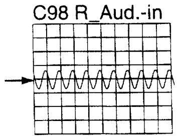

C55 R
1V / div DC
10µs / div


C70 SDA
1V / div DC
0.5s / div

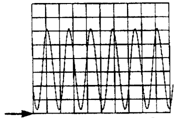

C71 SCL
1V / div DC
0.5s / div

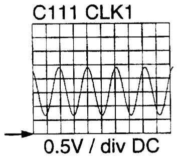

C93 DATA
1V / div DC
0.5s / div


C96 L_Aud.-in
1V / div DC
0.2ms / div

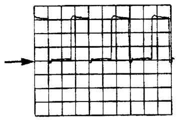

C98 R_Aud.-in
1V / div DC
1ms / div

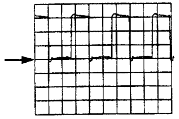
C103 +4V DC
C104 +4V DC
C108 +4V DC
C109 +4V DC

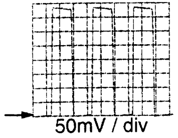

C110 CLK2
0.5V / div DC
2ms / div


C111 CLK1
0.5V / div DC
2ms / div

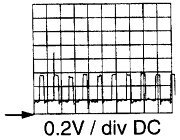
FD1 +380V DC
FD3 +10V DC
FD4 +19V DC
FD5 +18V DC


FD6 PIN14-7101
5V / div DC
5µs / div

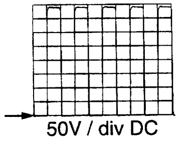

FD7 PIN12-7101
5V / div DC
5µs / div

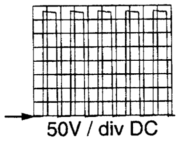

FD10 PIN11-5101
50mV / div
5µs / div

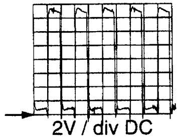
FD12 +2V5 DC
FD13 +2V5 DC
FD18 +5V DC
FD22 0V2 DC
FD23 +5V DC
FD24 0V
FD25 +8V6 DC
FD28 +5V DC
FD31 +4V6 DC
FD32 +5V DC
FD34 +13V DC
FD36 +7V DC

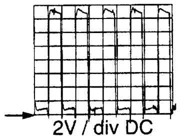

FD37 DC_PROT
0.2V / div DC
10µs / div

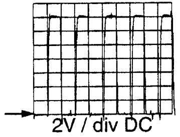
FD38 -18V DC
FD39 +4V8 DC
FD40 +18V DC
FD41 +5V DC
FD46 +17V DC


FD47 7005-G
50V / div DC
5µs / div

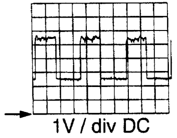

FD48 PIN11-5001
50V / div DC
5µs / div

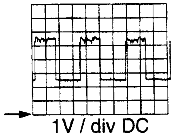

FD49 PIN14-7001
2V / div DC
2µs / div

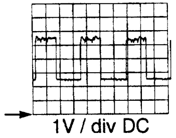

FD50 PIN12-7001
2V / div DC
2µs / div

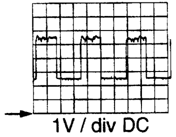

FD52 7006-G
2V / div DC
5µs / div

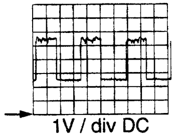
FD53 +2V5 DC
FD54 +2V5 DC
FD55 +180V DC
FD57 +65V DC
FD58 +5V5 DC

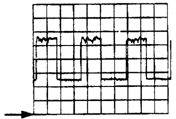

FD60 PROT_FAN1
1V / div DC
5ms / div


FD61 PROT_FAN2
1V / div DC
5ms / div

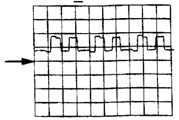

FD62 PROT_FAN3
1V / div DC
5ms / div

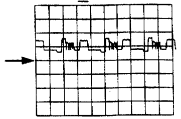

FD63 PROT_FAN4
1V / div DC
5ms / div

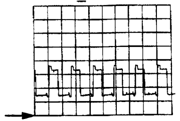

FD64 PROT_FAN5
1V / div DC
5ms / div

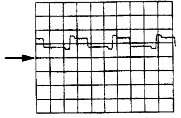

FD65 PIN8-7101
1V / div DC
5ms / div

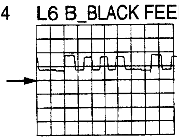
FD66 +5V DC
FD67 +2V5 DC

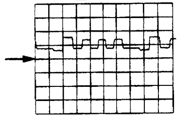

L1 R_BLACK FEED
1V / div DC
10µs / div


L2 R_VIDEO
1V / div DC
10µs / div

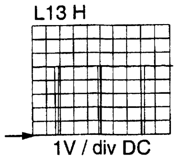

L4 G_BLACK FEED
0.5V / div DC
20µs / div

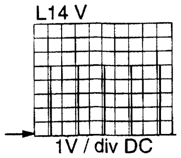

L5 G_VIDEO
1V / div DC
10µs / div


L6 B_BLACK FEED
1V / div DC
10µs / div

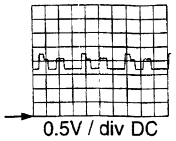

L7 B_VIDEO
1V / div DC
10µs / div

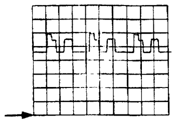
L8 +4V5 DC
L9 +5V DC
L10 +5V DC

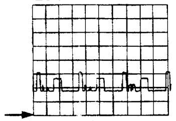

L13 H
1V / div DC
10µs / div

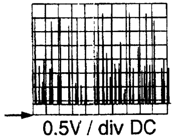

L14 V
1V / div DC
10µs / div

L26 +0V1 DC
L27 +3V6 DC

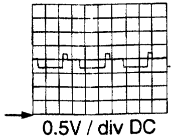

L28 VI
0.5V / div DC
10µs / div

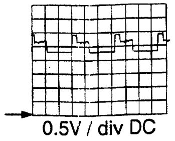

L29 7115-C
0.5V / div DC
10µs / div

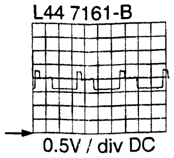

L30 7111-B
0.5V / div DC
10µs / div

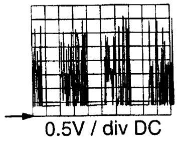

L31 01UF
0.5V / div DC
50µs / div

L32 +1V5 DC
L40 +0V1 DC
L41 +3V6 DC

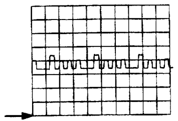

L42 VI
0.5V / div DC
10µs / div

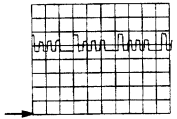

L43 7165-E
0.5V / div DC
10µs / div

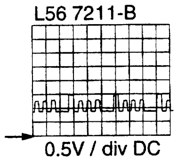

L44 7161-B
0.5V / div DC
10µs / div

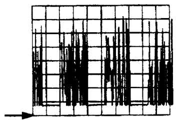

L45 01UF
0.5V / div DC
10µs / div

L46 +1V5 DC
L52 +0V1 DC
L53 +3V6 DC

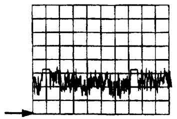

L54 VI
0.5V / div DC
10µs / div

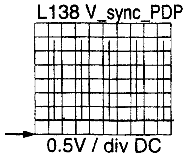

L55 7215-E
0.5V / div DC
10µs / div

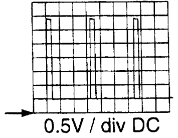

L56 7211-B
0.5V / div DC
10µs / div

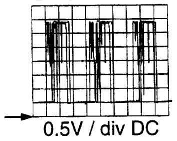

L57 01UF
0.5V / div DC
10µs / div

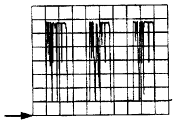
L58 +1V5 DC
L92 +1V1 DC
L93 +1V8 DC
L96 +1V8 DC
L97 +1V9 DC

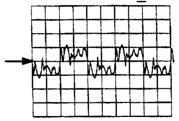

L124 NOISE
0.1V / div DC
5µs / div

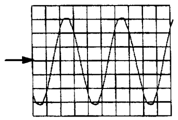

L138 V_sync_PDP
0.5V / div DC
10ms / div


L139 H_sync_PDP
0.5V / div DC
10µs / div

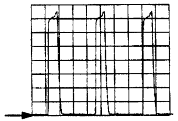

L140 BLANK
0.5V / div DC
10µs / div


L141 DIS CLK
0.5V / div DC
10µs / div


PR2 Neutral_IN
5V / div AC
5ms / div


PR3 PIN3-5400
0.1kV / div AC
5ms / div

PR6 +300V DC
PR8 +11V DC
PR9 +5V2 DC
PR12 +380V DC
PR14 +15V DC
PR15 +15V DC
PR16 +15V DC

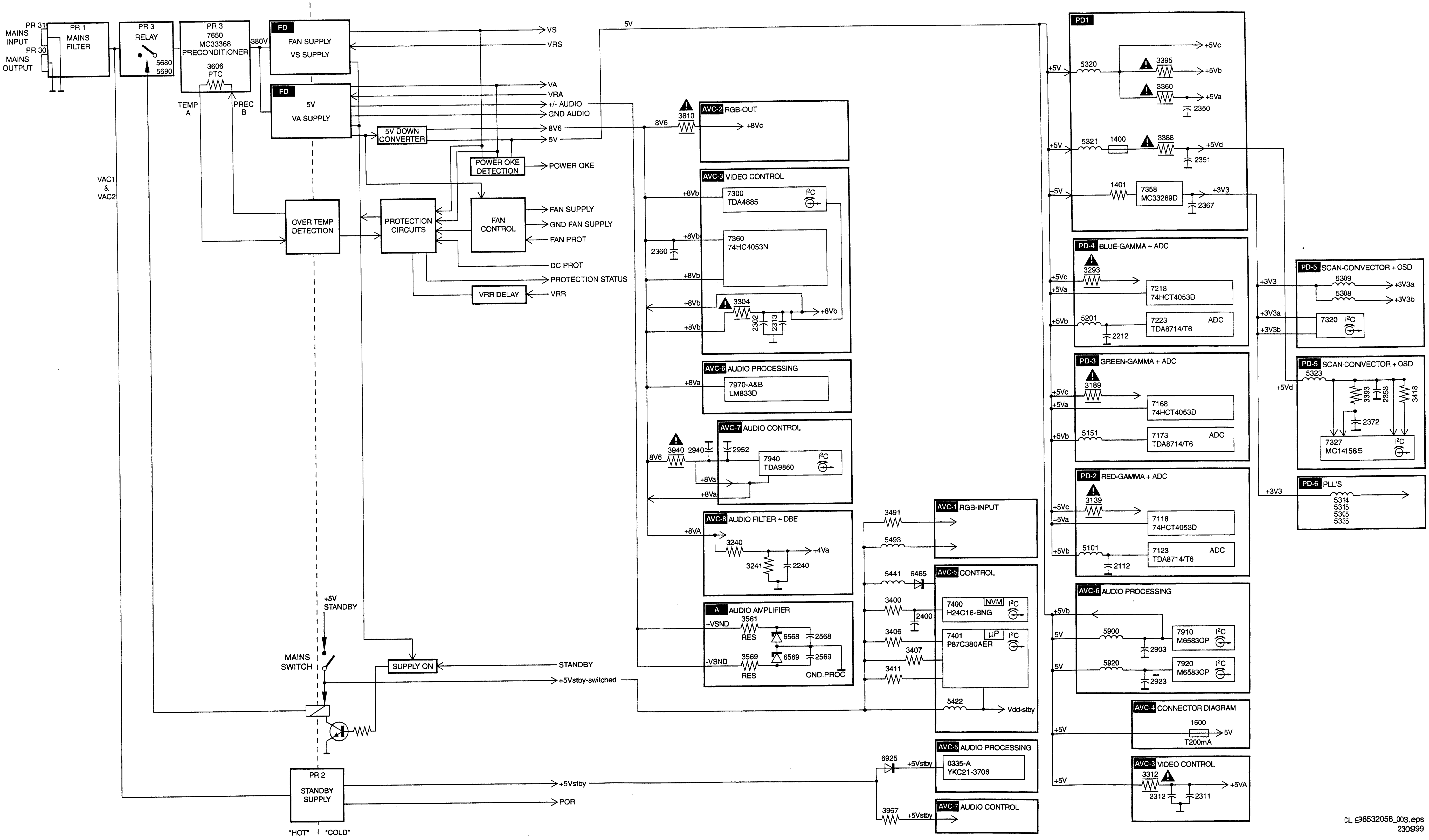

PR 17 SIG2
2V / div DC
1µs / div

PR18 +0V2 DC
PR19 +4V7 DC
PR20 +5V DC
PR21 +5V DC

→ = 0V

CL 96532058_016.eps
300999

Supply voltage diagram


PR 31
MAINS INPUT
PR 30
MAINS OUTPUT
PR 1
MAINS FILTER
PR 3
RELAY
5680
5690
PR 3
7650
MC33368
PRECONDITIONER
3606
PTC
380V
TEMP A
PREC B
FD
FAN SUPPLY
VS SUPPLY
FD
5V
VA SUPPLY
VS
VRS
VA
VRA
+/- AUDIO
GND AUDIO
8V6
5V
5V DOWN CONVERTER
POWER OKE DETECTION
POWER OKE
OVER TEMP DETECTION
PROTECTION CIRCUITS
FAN CONTROL
FAN SUPPLY
GND FAN SUPPLY
FAN PROT
DC PROT
PROTECTION STATUS
VRR DELAY
VRR
VAC1 & VAC2
+5V STANDBY
MAINS SWITCH
SUPPLY ON
STANDBY
+5Vstby-switched
PR 2
STANDBY SUPPLY
+5Vstby
POR
"HOT"
"COLD"
AVC-2 RGB-OUT
3810
+8Vc
AVC-3 VIDEO CONTROL
7300
TDA4885
I²C
+8Vb
7360
74HC4053N
2360
3304
2302
2313
AVC-6 AUDIO PROCESSING
+8Va
7970-A&B
LM833D
AVC-7 AUDIO CONTROL
3940
2940
2952
7940
TDA9860
AVC-8 AUDIO FILTER + DBE
+8VA
3240
3241
2240
+4Va
A AUDIO AMPLIFIER
+VSND
3561
RES
6568
2568
-VSND
3569
6569
2569
GND.PROC
AVC-1 RGB-INPUT
3491
5493
AVC-5 CONTROL
5441
6465
3400
2400
7400
NVM
H24C16-BNG
3406
7401
µP
P87C380AER
3407
3411
5422
Vdd-stby
AVC-6 AUDIO PROCESSING
6925
0335-A
YKC21-3706
AVC-7 AUDIO CONTROL
3967
PD1
+5V
5320
3395
3360
2350
+5Vc
+5Vb
+5Va
5321
1400
3388
2351
+5Vd
1401
7358
MC33269D
2367
+3V3
PD-4 BLUE-GAMMA + ADC
+5Vc
+5Va
3293
7218
74HCT4053D
5201
2212
7223
TDA8714/T6
ADC
PD-3 GREEN-GAMMA + ADC
3189
7168
74HCT4053D
5151
7173
TDA8714/T6
PD-2 RED-GAMMA + ADC
3139
7118
74HCT4053D
5101
2112
7123
TDA8714/T6
AVC-6 AUDIO PROCESSING
+5Vb
5900
2903
7910
M6583OP
5920
2923
7920
M6583OP
AVC-4 CONNECTOR DIAGRAM
1600
T200mA
AVC-3 VIDEO CONTROL
3312
2312
2311
+5VA
PD-5 SCAN-CONVERTOR + OSD
5309
5308
+3V3a
+3V3b
7320
PD-5 SCAN-CONVERTOR + OSD
5323
3393
2353
3418
2372
7327
MC141585
+5Vd
PD-6 PLL'S
5314
5315
5305
5335

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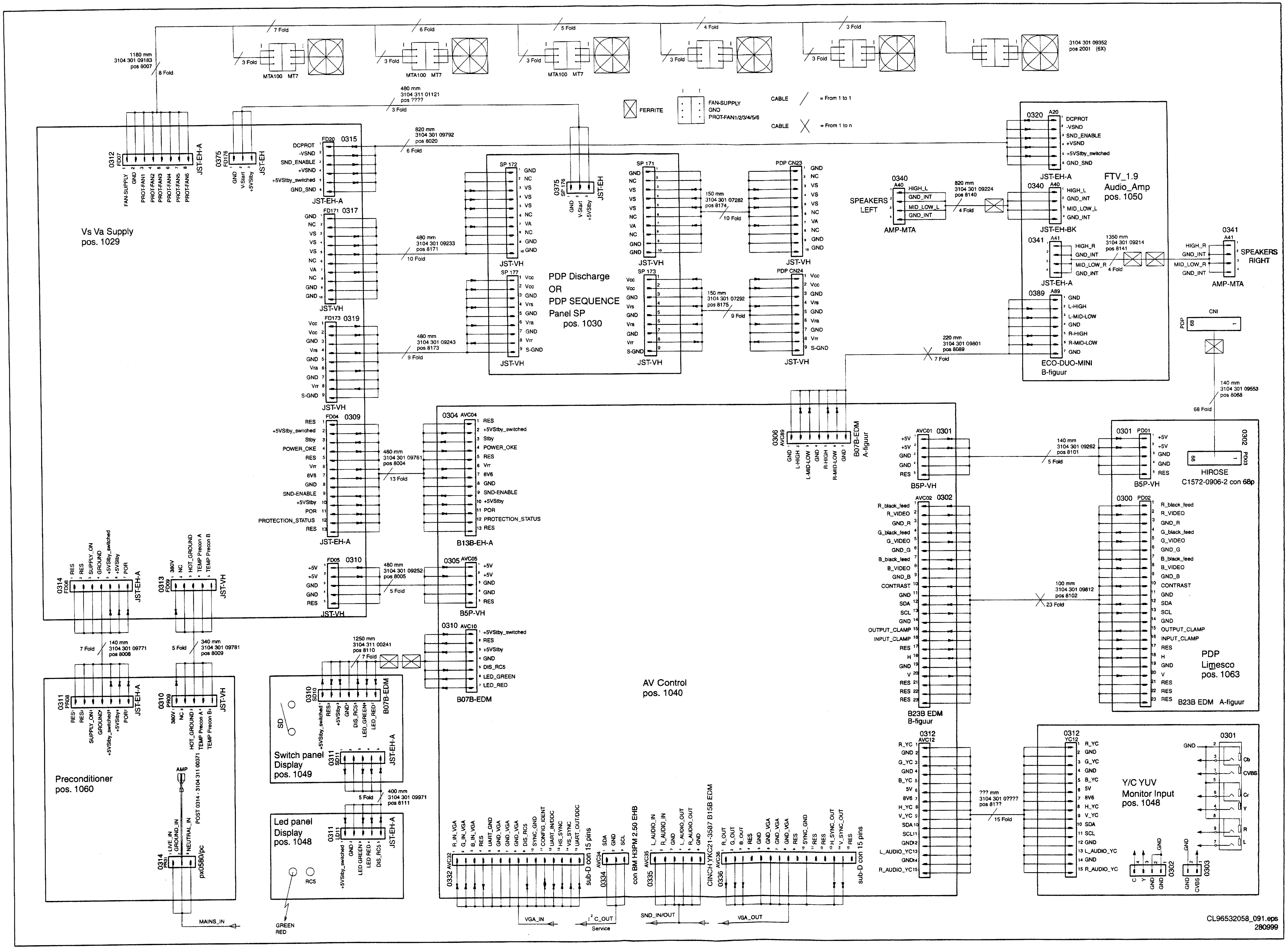
230999

Wiring diagram


1180 mm
3104 301 09183
pos 8007
8 Fold
7 Fold
6 Fold
5 Fold
4 Fold
3 Fold
MTA100 MT7
3104 301 09352
pos 2001 (6X)
480 mm
3104 311 01121
pos ????
FERRITE
FAN-SUPPLY
GND
PROT-FAN1/2/3/4/5/6
CABLE = From 1 to 1
CABLE = From 1 to n
0312 FD07 JST-EH-A
FAN-SUPPLY
GND
PROT-FAN1
PROT-FAN2
PROT-FAN3
PROT-FAN4
PROT-FAN5
PROT-FAN6
0375 FD176 JST-EH
GND
V-Start
+5VStby
Vs Va Supply
pos. 1029
FD20 0315
DCPROT
-VSND
SND_ENABLE
+VSND
+5VStby_switched
GND_SND
JST-EH-A
820 mm
3104 301 09792
pos 8020
FD171 0317
GND
NC
VS
VA
JST-VH
480 mm
3104 301 09233
pos 8171
10 Fold
FD173 0319
Vcc
GND
Vrs
Vra
Vrr
S-GND
480 mm
3104 301 09243
pos 8173
9 Fold
SP 172
SP 177
SP 171
SP 173
0375 SP176 JST-EH
PDP Discharge
OR
PDP SEQUENCE
Panel SP
pos. 1030
PDP CN23
PDP CN24
150 mm
3104 301 07282
pos 8174
150 mm
3104 301 07292
pos 8175
0320 A20
DCPROT
-VSND
SND_ENABLE
+VSND
+5VStby_switched
GND_SND
JST-EH-A
FTV_1.9
Audio_Amp
pos. 1050
0340 A40
HIGH_L
GND_INT
MID_LOW_L
SPEAKERS LEFT
AMP-MTA
820 mm
3104 301 09224
pos 8140
4 Fold
JST-EH-BK
0341 A41
HIGH_R
GND_INT
MID_LOW_R
1350 mm
3104 301 09214
pos 8141
SPEAKERS RIGHT
0389 A89
GND
L-HIGH
L-MID-LOW
R-HIGH
R-MID-LOW
ECO-DUO-MINI
B-figuur
220 mm
3104 301 09801
pos 8089
7 Fold
PDP
CNI
140 mm
3104 301 09553
pos 8068
68 Fold
FD04 0309
RES
+5VStby_switched
Stby
POWER_OKE
Vrr
8V6
SND-ENABLE
+5VStby
POR
PROTECTION_STATUS
480 mm
3104 301 09761
pos 8004
13 Fold
0304 AVC04
B13B-EH-A
0306 AVC89
L-HIGH
L-MID-LOW
R-HIGH
R-MID-LOW
B07B-EDM
A-figuur
AVC01 0301
+5V
B5P-VH
140 mm
3104 301 09262
pos 8101
5 Fold
0301 PD01
0302 PD03
HIROSE
C1572-0906-2 con 68p
AVC02 0302
R_black_feed
R_VIDEO
GND_R
G_black_feed
G_VIDEO
GND_G
B_black_feed
B_VIDEO
GND_B
CONTRAST
SDA
SCL
OUTPUT_CLAMP
INPUT_CLAMP
H
V
B23B EDM
B-figuur
100 mm
3104 301 09812
pos 8102
23 Fold
0300 PD02
PDP
Limesco
pos. 1063
B23B EDM A-figuur
FD05 0310
480 mm
3104 301 09252
pos 8005
0305 AVC05
0310 AVC10
+5VStby_switched
DIS_RC5
LED_GREEN
LED_RED
B07B-EDM
1250 mm
3104 311 00241
pos 8110
0314 FD08
SUPPLY_ON
GROUND
0313 FD09
380V
HOT_GROUND
TEMP Precon A
TEMP Precon B
140 mm
3104 301 09771
pos 8008
340 mm
3104 301 09781
pos 8009
0311 PR08
0310 PR09
Preconditioner
pos. 1060
AMP
POST 0314 - 3104 311 00371
0314 PR31
LIVE_IN
GROUND_IN
NEUTRAL_IN
px0580/pc
MAINS_IN
0310 SD10
SD
Switch panel
Display
pos. 1049
0311 SD11
400 mm
3104 301 09971
pos 8111
Led panel
Display
pos. 1048
0311 LD11
RC5
GREEN
RED
AV Control
pos. 1040
0332 AVC32
R_IN_VGA
G_IN_VGA
B_IN_VGA
UART_GND
GND_VGA
SYNC_GND
CONFIG_IDENT
UART_IN/DDC
HS_SYNC
VS_SYNC
UART_OUT/DDC
sub-D con 15 pins
0334 AVC34
con BM H3PM 2.50 EHB
0335 AVC35
L_AUDIO_IN
R_AUDIO_IN
L_AUDIO_OUT
R_AUDIO_OUT
CINCH YKC21-3587 B15B EDM
0336 AVC36
R_OUT
G_OUT
B_OUT
H_SYNC_OUT
V_SYNC_OUT
VGA_IN
I²C_OUT
Service
SND_IN/OUT
VGA_OUT
0312 AVC12
R_YC
G_YC
B_YC
5V
8V6
H_YC
V_YC
L_AUDIO_YC
R_AUDIO_YC
??? mm
3104 301 0????
pos 81??
15 Fold
0312 YC12
Y/C YUV
Monitor Input
pos. 1048
0301
Cb
CVBS
Cr
Y
R
L
0302
0303
C
Y
CVBS
CL96532058_091.eps
280999

7. Electrical diagrams and print layouts

VsVa supply (FD)

0309 G15
0310 E15
0313 A1
0314 H15
0315 D10
0319 C15
0324 A9
0333 G10
1101 A3
1102 B9
1103 G6
1104 C9
1105 A10
1201 D8
1202 E8
2101 A7
2102 A6

2103 A5
2104 A1
2105 B2
2106 B2
2107 D2
2108 E4
2109 D3
2110 D4
2111 C9
2112 C8
2113 A8
2114 C5
2115 C4
2116 C2
2117 C3
2118 C4
2120 A11

2122 C10
2123 B10
2124 B11
2125 A12
2126 F3
2127 E3
2128 A10
2129 C10
2130 E6
2131 C10
2132 C14
2133 A6
2134 B13
2135 B14
2201 F8
2202 F7
2203 G7

2204 G7
2205 G8
2206 H8
2207 H8
2208 G8
2209 F9
2210 F9
2211 G10
2212 F11
2213 F11
2214 H7
2215 E8
2216 E8
2220 E8
2221 E8
2222 D7
2223 G9

2224 G9
2302 E11
2316 H4
2320 G9
2324 G15
3099 F10
3100 D6
3101 A4
3102 A5
3103 A2
3104 B1
3105 B2
3106 B2
3107 C2
3108 C2
3109 D2
3110 B5

3111 B5
3112 E3
3113 E4
3114 A7
3115 A7
3116 B7
3117 C7
3118 C7
3119 C7
3120 C3
3121 D5
3122 B11
3123 B11
3124 A12
3125 C12
3126 D11
3127 A12

3128 C12
3129 B12
3130 B12
3131 B12
3132 C13
3133 A13
3134 B13
3135 A13
3136 A14
3137 B14
3138 C14
3139 A14
3140 C3
3157 B10
3164 E3
3165 D2
3166 D3

3170 D3
3171 A8
3172 B8
3173 C8
3174 C8
3175 E4
3176 E3
3177 D5
3180 C3
3181 C4
3182 C5
3201 F7
3202 G7
3203 H8
3204 G8
3205 G9
3206 F8

3207 H7
3210 E7
3211 G9
3212 G8
3213 G7
3214 G9
3215 H6
3216 H7
3217 H8
3301 E12
3302 E12
3303 E12
3304 E13
3305 F12
3306 F12
3307 G13
3308 F13

3331 F1
3332 G1
3333 H1
3334 G2
3335 H2
3336 G3
3337 H4
3338 G4
3339 G5
3360 G11
3361 H11
3362 G11
3363 H11
3364 G12
3365 H12
3366 G12
3370 G14

3371 E14
3372 G4
3373 G4
3379 B15
3384 A15
3385 B15
3386 B15
3387 H15
3390 E13
3391 F13
3392 G13
3393 F9
3999 H10
5101 B6
5102 C9
5103 A4
5104 A7

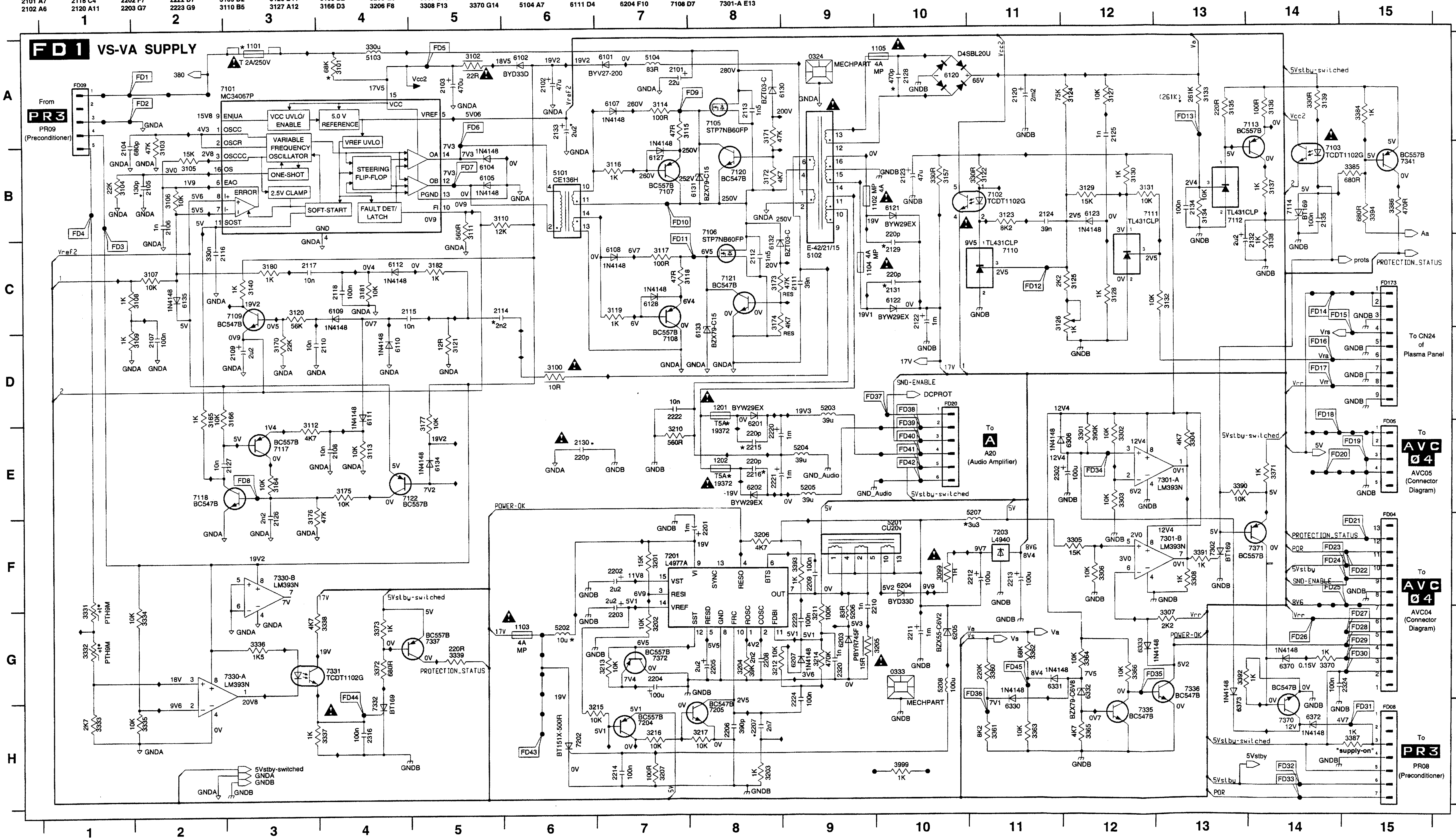
5201 F10
5202 G6
5203 D9
5204 E9
5205 E9
5206 G9
5207 F11
5208 G10
6101 A7
6102 A6
6104 B5
6105 B5
6107 A7
6108 C7
6109 C4
6110 D4
6111 D4

6112 C4
6120 A10
6121 B10
6122 C10
6123 B12
6127 B7
6128 C7
6130 A8
6131 B8
6132 C8
6133 D8
6134 E5
6135 C2
6201 E8
6202 E8
6203 G9
6204 F10

6205 G10
6207 G9
6306 E12
6330 H11
6331 G11
6332 G12
6333 G12
6370 G14
6372 H14
6373 H13
7101 A2
7102 B11
7103 B15
7105 A8
7106 B8
7107 B7
7108 D7

7109 C3
7110 C11
7111 B12
7112 B13
7113 A13
7114 B14
7117 E3
7118 E2
7120 B8
7121 C8
7122 E5
7201 F7
7202 H6
7203 F11
7204 H7
7205 H8
7301-A E13

7301-B F13
7302 F13
7330-A G2
7330-B F3
7331 G4
7332 H4
7335 H12
7336 G13
7337 G5
7341 B15
7370 H14
7371 F14
7372 G7


FD1 VS-VA SUPPLY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H
From PR3 PR09 (Preconditioner)
FD09
1101 T 2A/250V
7101 MC34067P
VCC UVLO/ENABLE
5.0 V REFERENCE
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
ONE-SHOT
STEERING FLIP-FLOP
2.5V CLAMP
ERROR
SOFT-START
FAULT DET/ LATCH
7105 STP7NB60FP
7106 STP7NB60FP
7120 BC547B
7121 BC547B
7107 BC557B
7108 BC557B
5101 CE136H
5102 E-42/21/15
0324 MECHPART
1105 4A MP
6120 D4SBL20U
6121 BYW29EX
6122 BYW29EX
7102 TCDT1102G
7110 TL431CLP
7111 TL431CLP
7112 TL431CLP
7113 BC557B
7103 TCDT1102G
7341 BC557B
PROTECTION_STATUS
To CN24 of Plasma Panel
FD173
SND-ENABLE
DCPROT
FD20
To A A20 (Audio Amplifier)
1201 BYW29EX
1202 BYW29EX
5Vstby-switched
7301-A LM393N
7301-B LM393N
To AVC 04 AVC05 (Connector Diagram)
To AVC 04 AVC04 (Connector Diagram)
POWER-OK
7201 L4977A
5201 CU20V
7203 L4940
6204 BYD33D
7330-B LM393N
7330-A LM393N
7331 TCDT1102G
7337 BC557B
1103 4A MP
6205 BZX55-C6V2
0333 MECHPART
7202 BT151X-500R
7204 BC557B
7205 BC547B
7372 BC557B
7335 BC547B
7336 BC547B
7370 BC547B
7371 BC557B
To PR3 PR08 (Preconditioner)
FD08
"supply-on"
5Vstby-switched GNDA GNDB

CL 96532058_034.EPS
240899

VsVa supply (FD)

0312 E15
0317 B15
0318 D15
0322 A9
0331 F5
0339 A13
1004 A2
1005 B10
2001 A6
2002 B6
2003 B5
2004 C1
2005 C1
2006 C2
2007 E2
2008 E4
2009 D5
2010 D4
2011 D9
2012 C8
2013 B8
2014 D5
2015 D5
2016 D2
2017 F3
2018 F4
2020 A11
2021 A12
2022 C10
2023 A10
2024 B12
2025 A12
2026 E3
2027 E2
2028 A10
2029 B10
2030 F9
2032 C14
2033 D1
2034 D1
2035 E1
2036 C2
2037 B13
2038 C14
2303 G2
2304 D11
2305 D12
2306 E11
2307 E12
2308 F11
2309 F12
2310 G11
2311 G12
2312 H11
2313 H12
2314 H10
2315 G7
2317 H15
2318 H5
2319 H14
2321 H7
2322 H6
2323 H5
3001 A5
3002 A5
3003 C2
3004 C1
3005 C2
3006 C2
3007 E2
3008 E2
3009 E2
3010 C6
3011 D5
3012 E3
3013 E4
3014 B8
3015 B8
3016 B7
3017 C8
3018 D8
3019 D7
3020 D4
3021 D5
3022 A11
3023 B11
3024 A12
3025 C12
3026 C12
3027 E3
3029 B12
3030 B13
3031 B13
3032 C13
3033 A13
3034 B13
3035 A14
3036 A14
3037 C13
3038 C14
3039 B14
3040 A12
3041 C12
3042 D1
3043 C1
3044 D1
3045 D1
3046 E1
3047 E2
3048 D1
3049 D2
3050 E7
3056 D3
3057 A11
3058 A13
3059 A5
3060 A3
3061 B3
3062 A4
3063 A4
3064 E3
3065 E2
3066 D2
3067 D3
3068 D7
3069 D6
3070 D6
3071 E5
3072 F2
3073 F4
3074 E5
3075 B9
3076 C9
3077 D9
3078 D9
3310 G1
3311 H1
3312 G1
3313 H1
3314 G2
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7003 C14
7005 B8
7006 C8
7007 C8
7008 D8
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7011 B13
7012 A14
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7015 B4
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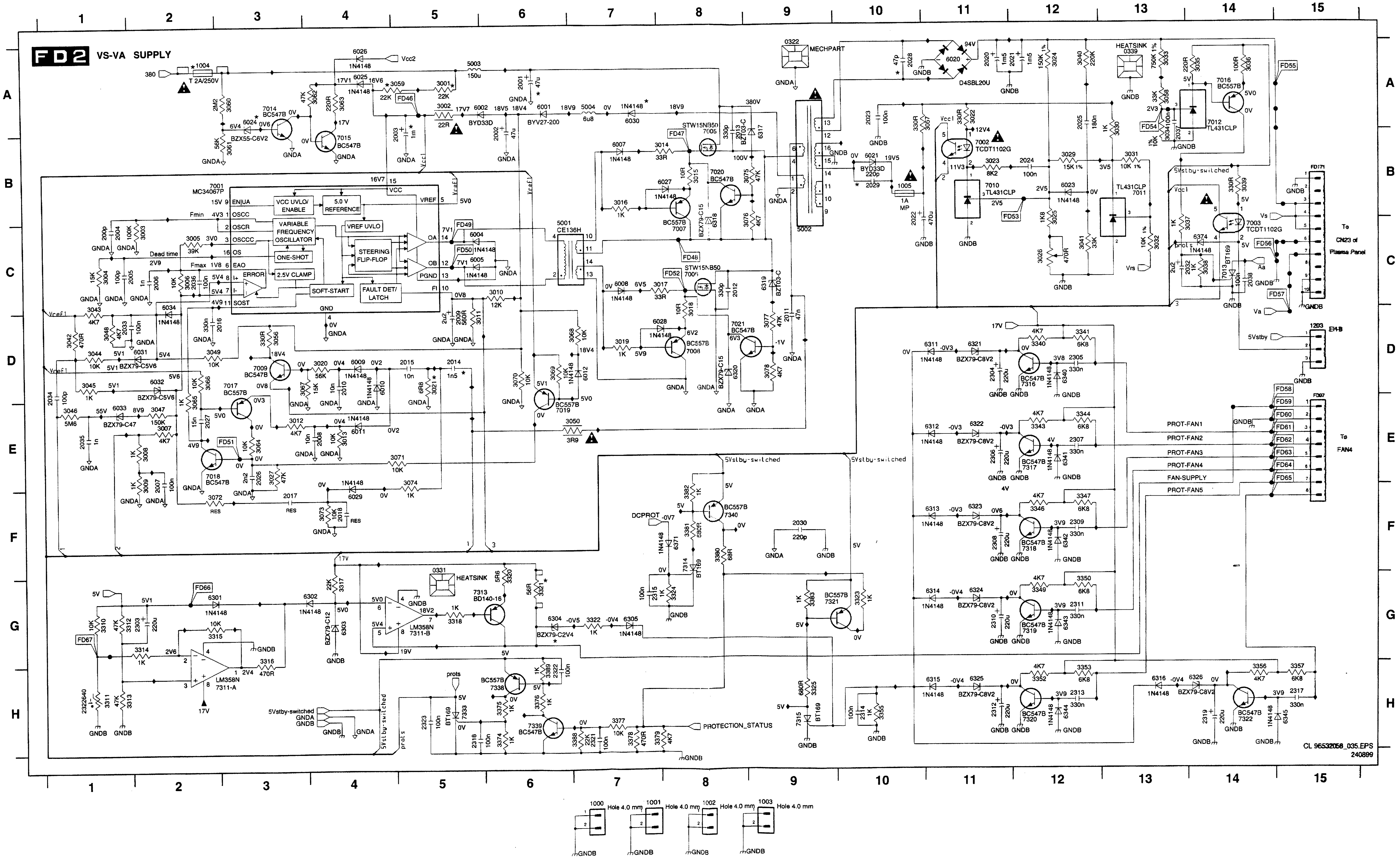
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2003
1m
2002
47u
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ENJUA
VCC UVLO/ ENABLE
5.0 V REFERENCE
VREF
5V0
Fmin
4V3
OSCC
OSCR
VARIABLE FREQUENCY OSCILLATOR
VREF UVLO
OSCCC
ONE-SHOT
STEERING FLIP-FLOP
OA
OB
PGND
FI
Dead time
OS
Fmax
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EAO
ERROR
2.5V CLAMP
SOFT-START
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15K 1%
3V5
3031
10K 1%
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TL431CLP
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FD53
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220K
2025
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1K
HEATSINK
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750K 1%
3058
33K
3034
100n
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10K
2V3
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220R
5V
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TL431CLP
7016
BC557B
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100R
5V0
FD55
5Vstby-switched
3039
330R
3037
1K
7003
TCDT1102G
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1N4148
prots
7013
BT169
3038
1K
2032
2u2
2038
100n
FD56
FD57
Vs
Va
Vrs
Aa
FD171
To CN23 of Plasma Panel
1203
EH-B
5Vstby
FD97
To FAN4
FD58
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FD60
FD61
FD62
FD63
FD64
FD65
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PROT-FAN2
PROT-FAN3
PROT-FAN4
FAN-SUPPLY
PROT-FAN5
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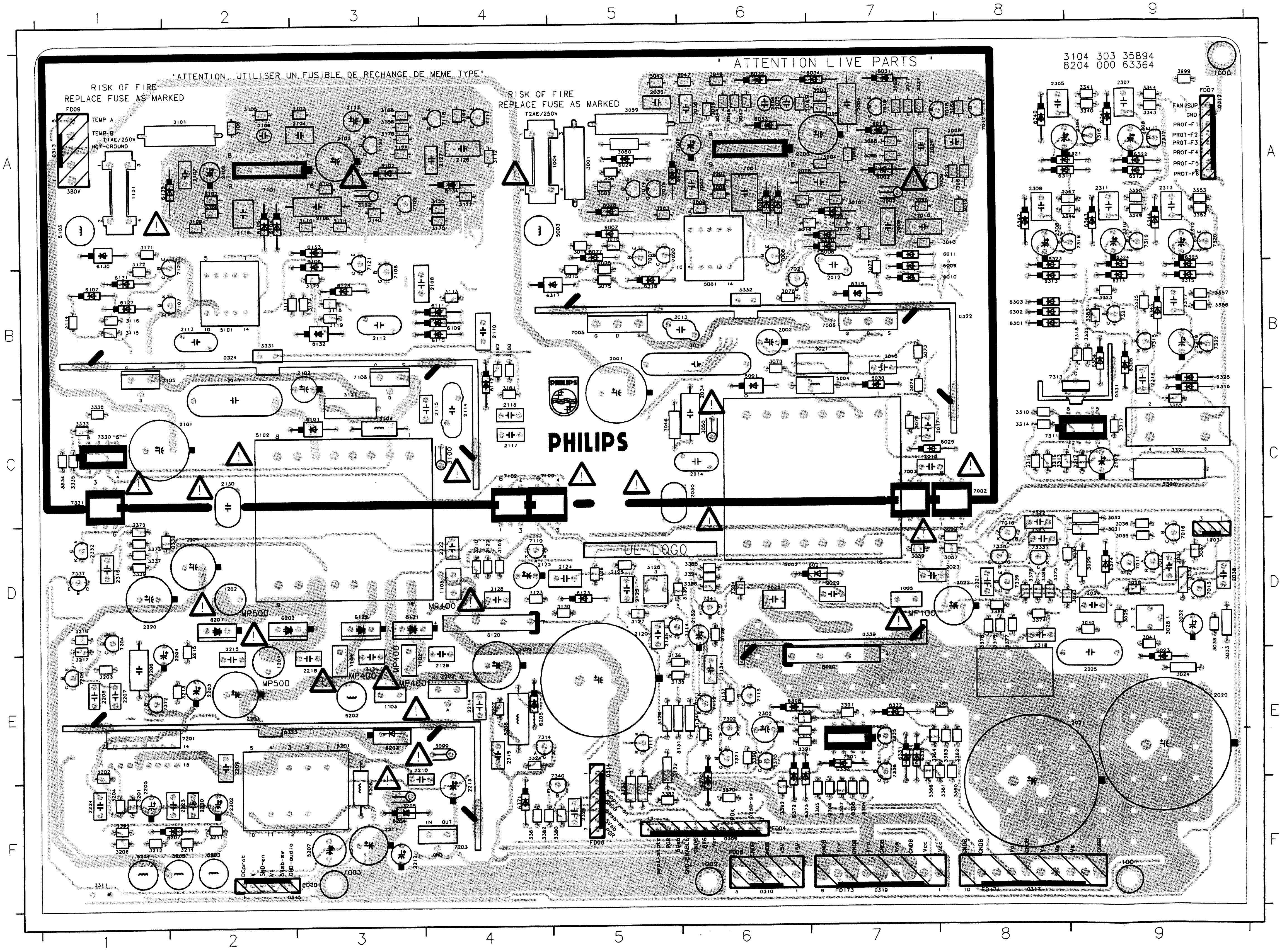
1001
Hole 4.0 mm
1002
Hole 4.0 mm
1003
Hole 4.0 mm

VsVa supply (FD) component side



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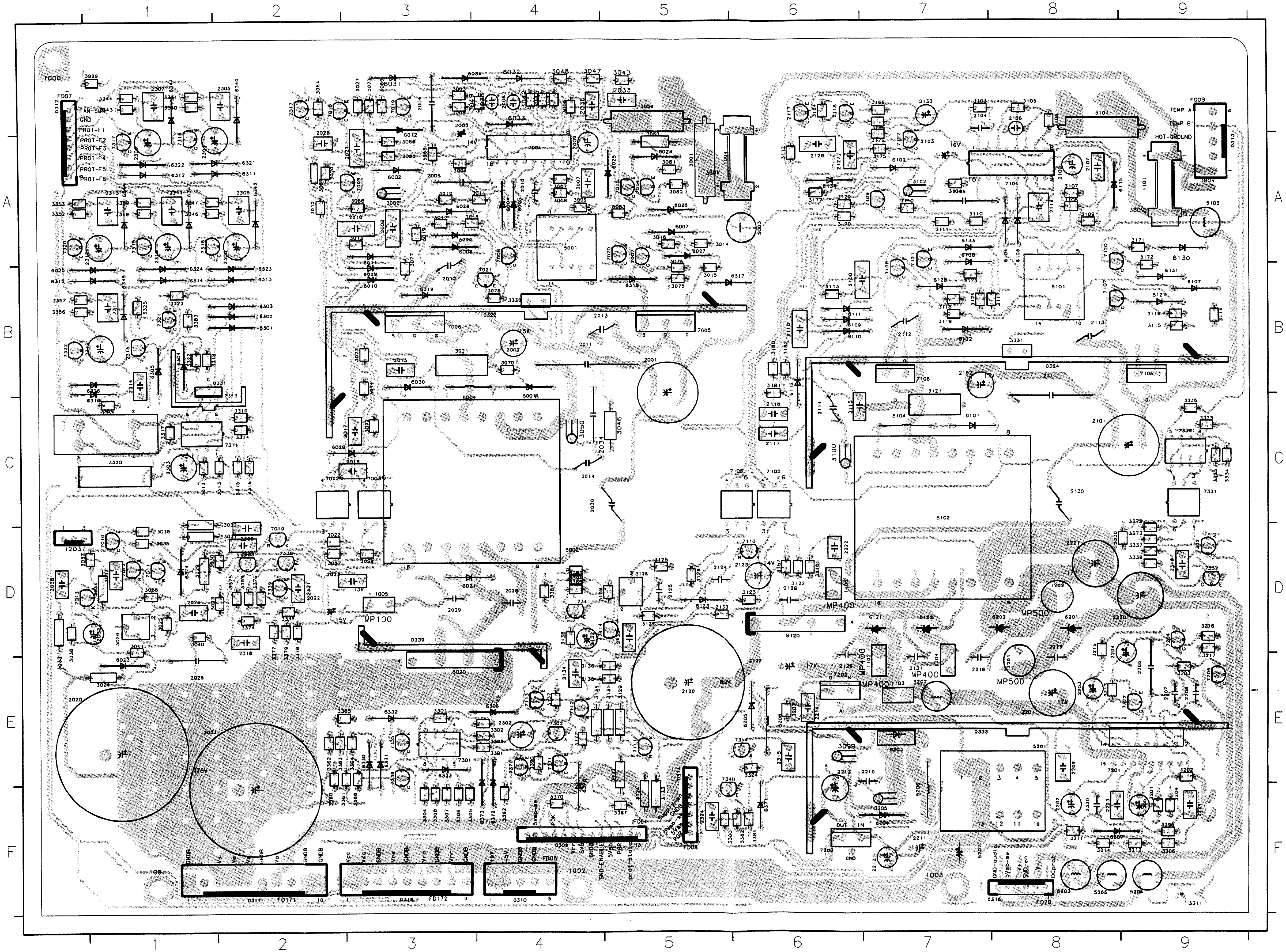
96532058_060.eps
271099

VsVa supply (FD) copper side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PROT-F2
PROT-F3
PROT-F4
PROT-F5
PROT-F6
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TEMP B
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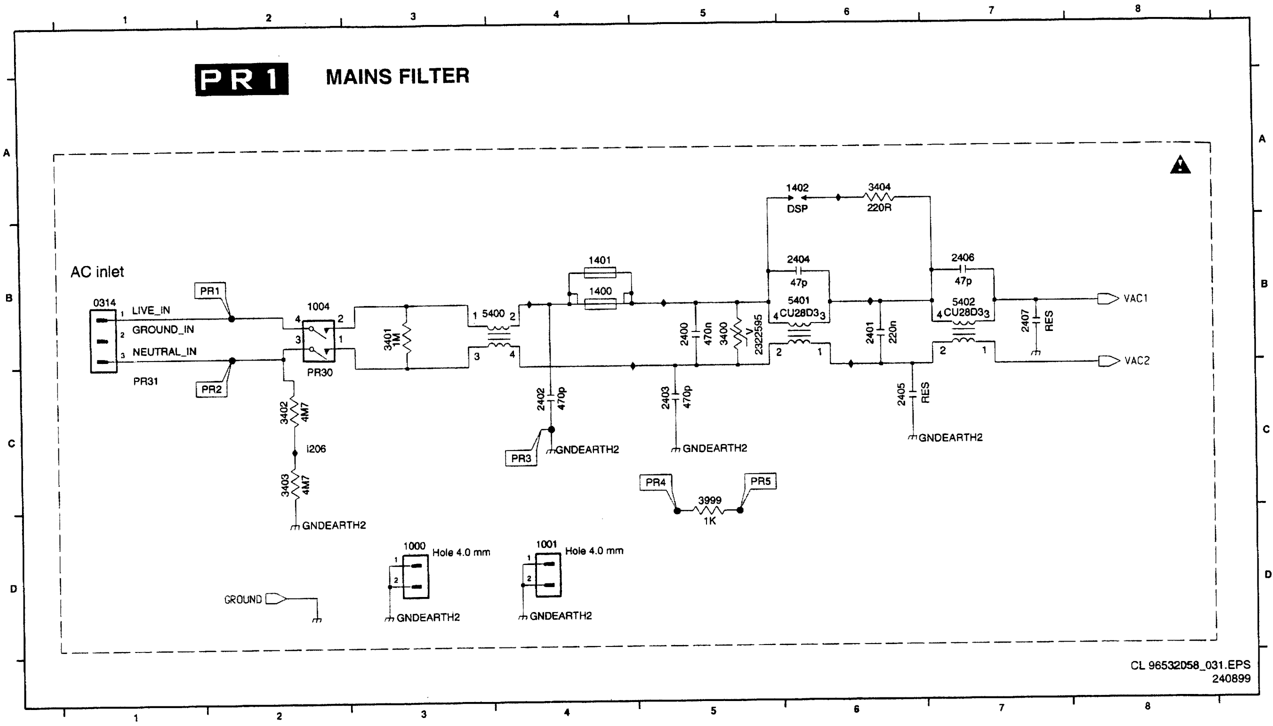
OUT
IN
GND

Pre conditioner (PR)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GROUND_IN
NEUTRAL_IN
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3402 4M7
I206
3403 4M7
GNDEARTH2
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1401
1400
2402 470p
PR3
GNDEARTH2
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3400 2322595
2403 470p
GNDEARTH2
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3404 220R
2404 47p
5401 CU28D3
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2405 RES
GNDEARTH2
2406 47p
5402 CU28D3
2407 RES
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VAC2
PR4
PR5
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1001 Hole 4.0 mm
GROUND
GNDEARTH2
GNDEARTH2
CL 96532058_031.EPS
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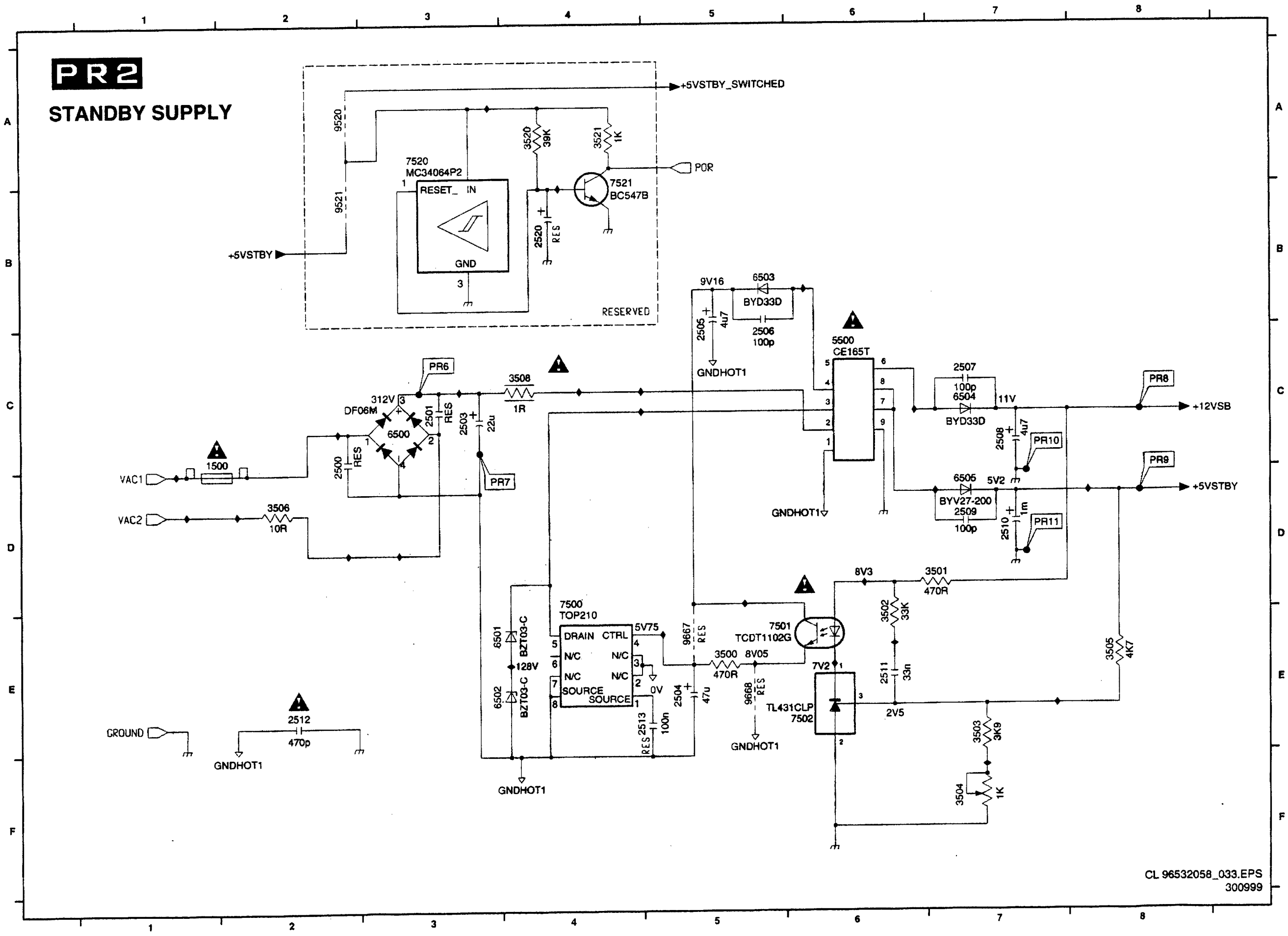
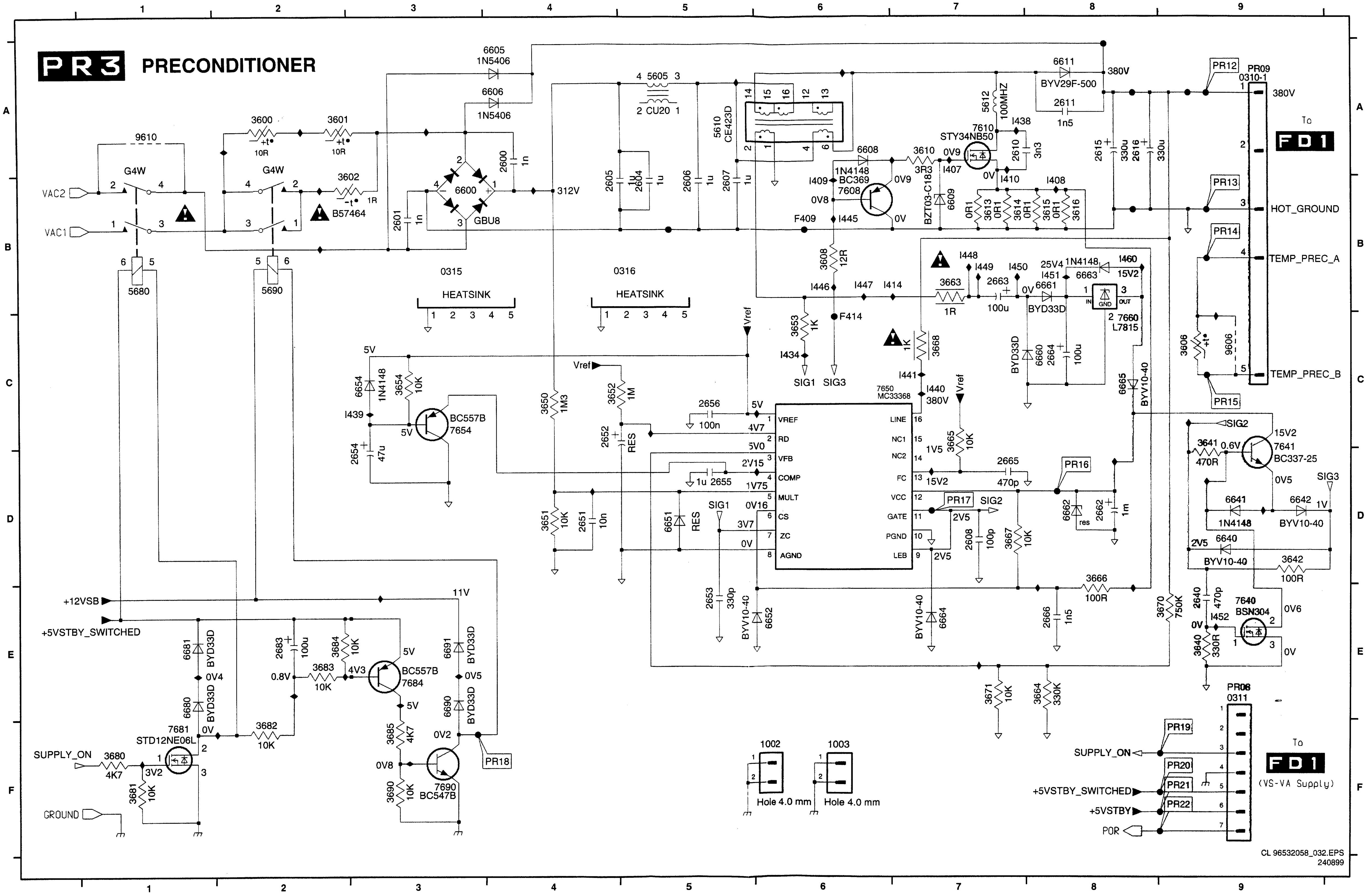
5401	B6
5402	B7
F200	B2
F201	C2
F202	C4
F203	C2
F204	A2
F205	D5
F206	D5
F207	B2
F208	B2
F209	B2
F210	C2
F211	B2
F212	C2
I200	A6
I201	B4
I202	B5
I203	B6
I204	B4
I205	B6
I206	C2

Pre conditioner (PR)


PR2
STANDBY SUPPLY
+5VSTBY_SWITCHED
9520
9521
7520 MC34064P2
RESET_ IN
GND
3520 39K
3521 1K
7521 BC547B
POR
2520 RES
+5VSTBY
RESERVED
9V16
6503 BYD33D
2505 4u7
2506 100p
GNDHOT1
5500 CE165T
PR6
312V
DF06M
6500
2501 RES
2503 22u
3508 1R
PR7
2500 RES
VAC1
1500
VAC2
3506 10R
2507 100p
6504 BYD33D
11V
2508 4u7
PR8
+12VSB
PR10
6505 BYV27-200
5V2
2509 100p
2510 1m
PR9
+5VSTBY
PR11
GNDHOT1
8V3
3501 470R
3502 33K
6501 BZT03-C
128V
6502 BZT03-C
7500 TOP210
DRAIN CTRL
N/C N/C
SOURCE SOURCE
5V75
0V
9667 RES
2504 47u
2513 100n RES
3500 470R
8V05
9668 RES
7501 TCDT1102G
7V2
2511 33n
TL431CLP 7502
2V5
3505 4K7
3503 3K9
3504 1K
GROUND
2512 470p
GNDHOT1
GNDHOT1
GNDHOT1
CL 96532058_033.EPS
300999

1500	C1
2500	C2
2501	C3
2503	C3
2504	E5
2505	C5
2506	C5
2507	C7
2508	C7
2509	D7
2510	D7
2511	E6
2512	E2
2513	E5
2520	B4
3500	E5
3501	D7
3502	E6
3503	E7
3504	F7
3505	E8
3506	D2
3508	C4
3520	A4
3521	A4
5500	C6
6500	C3
6501	E3
6502	E3
6503	B5
6504	C7
6505	D7
7500	D4
7501	E6
7502	E5
7520	A4
7521	B4
9520	A2
9521	B2
9667	E5
9668	E5
F300	C3
F301	C8
F302	D8
F303	C7
F304	D7
F305	C3
I300	A3
I301	A4
I303	C4
I304	C6
I306	C2
I307	C4
I308	C1
I309	B6
I310	D7
I311	E3
I312	D6
I314	D5
I316	E5
I317	E5
I318	E6
I319	E7
I320	F7
I321	D1
I322	D3
I323	D2
I324	C4
I325	C3
I326	D2
I327	D8

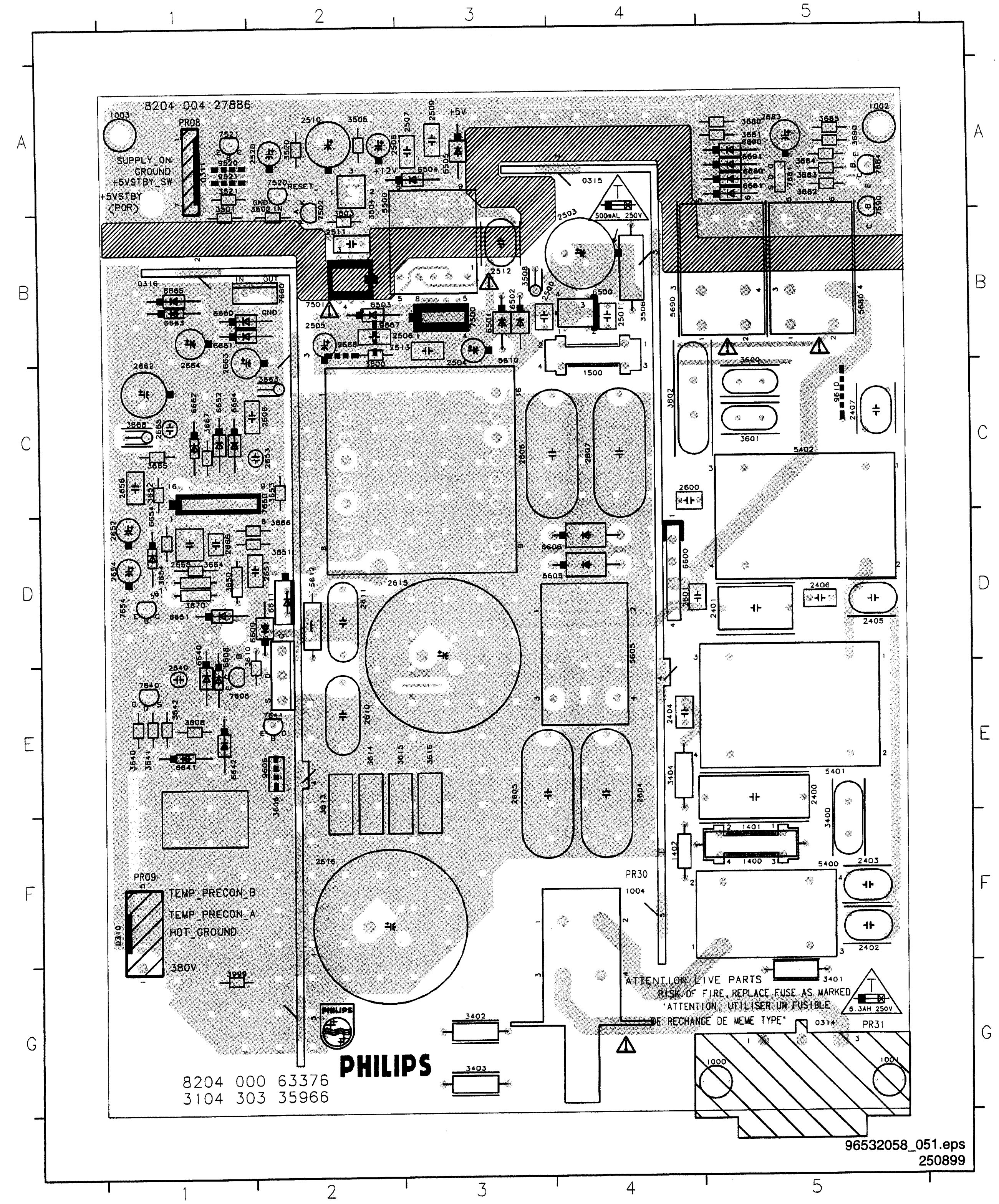
Pre conditioner (PR)


PR3
PRECONDITIONER
1 2 3 4 5 6 7 8 9
A B C D E F
VAC2
VAC1
9610
G4W
3600
3601
10R
3602
1R
B57464
5680
5690
6605 1N5406
6606 1N5406
6600 GBU8
2600 1n
2601 1n
312V
0315 HEATSINK
0316 HEATSINK
5605 2 CU20
5610 CE423D
2604 1u
2605 1u
2606 1u
2607 1u
6611 BYV29F-500
2611 1n5
380V
5612 100MHZ
7610 STY34NB50
6608 1N4148
7608 BC369
3610 3R3
6609 BZT03-C18
2610 3n3
3613 0R1
3614 0R1
3615 0R1
3616 0R1
2615 330u
2616 330u
3608 12R
3653 1K
F409
F414
SIG1
SIG3
3663 1R
2663 100u
6661 BYD33D
6663 1N4148
7660 L7815
15V2
25V4
6660 BYD33D
2664 100u
3668 1K
Vref
7650 MC33368
VREF RD VFB COMP MULT CS ZC AGND
LINE NC1 NC2 FC VCC GATE PGND LEB
2656 100n
2655 1u
6651 RES
2652 RES
3652 1M
3650 1M3
3651 10K
2651 10n
2653 330p
6652 BYV10-40
6664 BYV10-40
3665 10K
2665 470p
2608 100p
3667 10K
6662 res
2662 1m
3666 100R
2666 1n5
3670 750K
3671 10K
3664 330K
6665 BYV10-40
PR16
PR17
SIG2
5V
6654 1N4148
3654 10K
7654 BC557B
2654 47u
PR12
PR13
PR14
PR15
PR09 0310-1
380V
HOT_GROUND
TEMP_PREC_A
TEMP_PREC_B
3606
9606
To
FD1
3641 470R
7641 BC337-25
6641 1N4148
6642 BYV10-40
6640 BYV10-40
3642 100R
2640 470p
7640 BSN304
3640 330R
SIG3
+12VSB
+5VSTBY_SWITCHED
11V
6681 BYD33D
6680 BYD33D
7681 STD12NE06L
3680 4K7
3681 10K
SUPPLY_ON
GROUND
2683 100u
3682 10K
3683 10K
3684 10K
7684 BC557B
3685 4K7
3690 10K
7690 BC547B
6691 BYD33D
6690 BYD33D
PR18
1002
1003
Hole 4.0 mm
Hole 4.0 mm
PR08 0311
PR19
PR20
PR21
PR22
SUPPLY_ON
+5VSTBY_SWITCHED
+5VSTBY
POR
To
FD1
(VS-VA Supply)

CL 96532058_032.EPS
240899

0310-1	A9
0311	E9
0315	B3
0316	B5
1002	F6
1003	F6
2600	A4
2601	B3
2604	B5
2605	B4
2606	B5
2607	B5
2608	D7
2610	A7
2611	A8
2615	A8
2616	A8
2640	E9
2651	D4
2652	C4
2653	E5
2654	D3
2655	D5
2656	C5
2662	D8
2663	B7
2664	C8
2665	D7
2666	E8
2683	E2
3600	A2
3601	A2
3602	B3
3606	C9
3608	B6
3610	A7
3613	B7
3614	B7
3615	B8
3616	B8
3640	E9
3641	C9
3642	D9
3650	C4
3651	D4
3652	C4
3653	C6
3654	C3
3663	B7
3664	E8
3665	C7
3666	D8
3667	D7
3668	C7
3670	E9
3671	E7
3680	F1
3681	F1
3682	F2
3683	E2
3684	E2
3685	F3
3690	F3
5605	A5
5610	A5
5612	A7
5680	B1
5690	B2
6600	B3
6605	A4
6606	A4
6608	A6
6609	B7
6611	A8
6640	D9
6641	D9
6642	D9
6651	D5
6652	E6
6654	C3
6660	C8
6661	B8
6662	D8
6663	B8
6664	E7
6665	C8
6680	E1
6681	E1
6690	E3
6691	E3
7608	B6
7610	A7
7640	E9
7641	D9
7650	C6
7654	C3
7660	C8
7681	F1
7684	E3
7690	F3
9606	C9
9610	A1

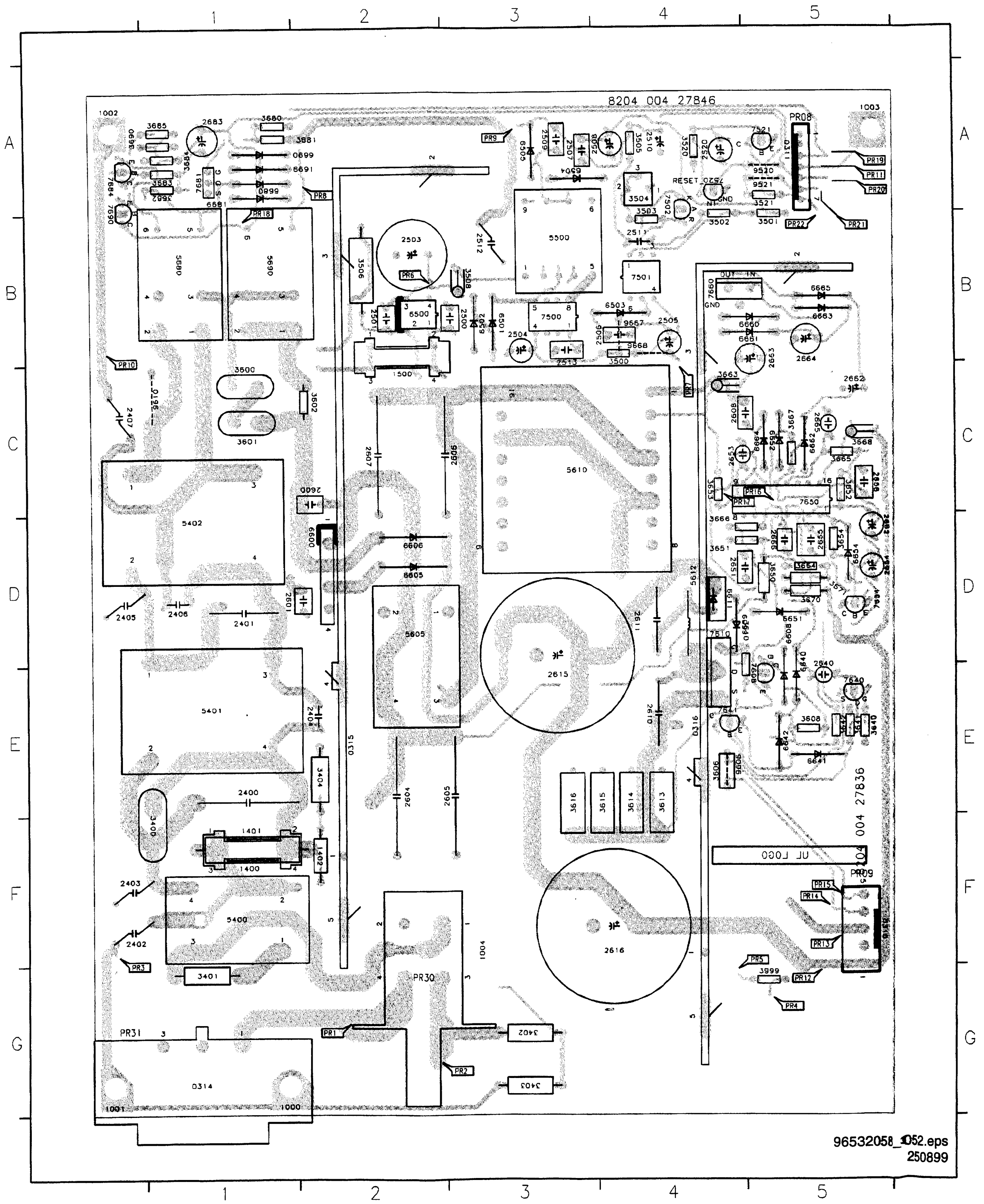
Pre conditioner (PR) component side


1
2
3
4
5
A
B
C
D
E
F
G
8204 004 27886
1003
1002
PR08
SUPPLY_ON
GROUND
+5VSTBY_SW
+5VSTBY
(POR)
+5V
+12V
RESET
GND
IN
OUT
0315
500mAL 250V
1500
5402
5401
5400
5605
2615
2616
PR09
TEMP_PRECON_B
TEMP_PRECON_A
HOT_GROUND
380V
0310
3999
PR30
PR31
1004
1000
1001
0314
3402
3403
ATTENTION LIVE PARTS
RISK OF FIRE, REPLACE FUSE AS MARKED
"ATTENTION, UTILISER UN FUSIBLE
DE RECHANGE DE MEME TYPE"
6.3AH 250V
PHILIPS
8204 000 63376
3104 303 35966

96532058_051.eps
250899

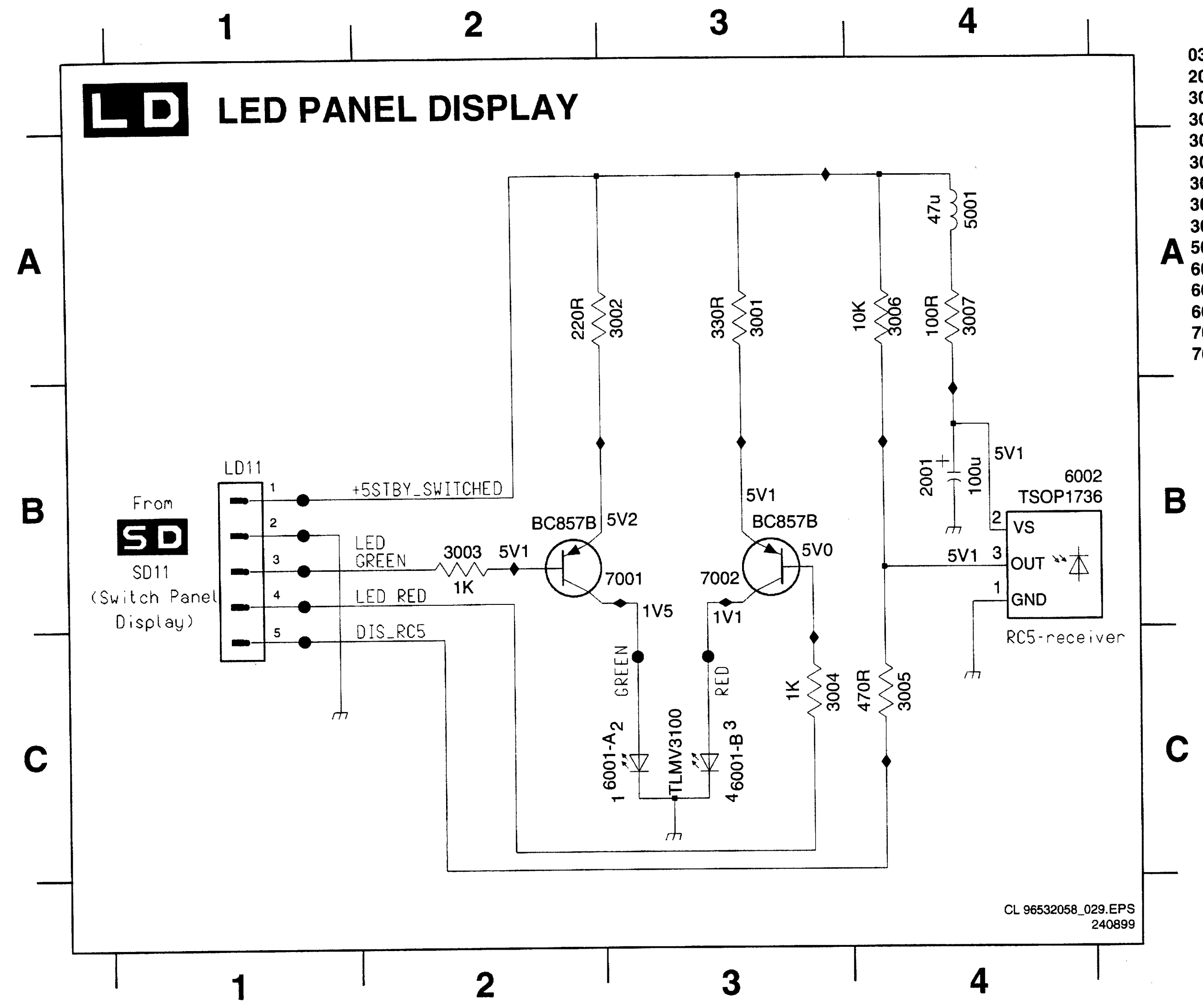
0310	F1
0311	A1
0314	G5
0315	A4
0316	B1
1004	F4
1400	F5
1401	F5
1402	F4
1500	C4
2400	E5
2401	D5
2402	F5
2403	F5
2404	E4
2405	D5
2406	D5
2407	C5
2500	B3
2501	B4
2503	B4
2504	B3
2505	B2
2506	B3
2507	A3
2508	A2
2509	A3
2510	A2
2511	B2
2512	B3
2513	B2
2520	A2
2600	C4
2601	D4
2604	E4
2605	E3
2606	C3
2607	C4
2608	C2
2610	E2
2611	D2
2615	D2
2616	F2
2640	E1
2651	D2
2652	D1
2653	C2
2654	D1
2655	D1
2656	C1
2662	B1
2663	B1
2664	B1
2665	C1
2666	D1
2683	A5
3400	F5
3401	G5
3402	G3
3403	G3
3404	E4
3500	B2
3501	A1
3502	A2
3503	A2
3504	A2
3505	A2
3506	B4
3508	B3
3520	A2
3521	A1
3600	B5
3601	C5
3602	C4
3606	E2
3608	E1
3610	D1
3613	E2
3614	E2
3615	E2
3616	E3
3640	E1
3641	E1
3642	E1
3650	D1
3651	D2
3652	C1
3653	C2
3654	D1
3663	C2
3664	D1
3665	C1
3666	D2
3667	C1
3668	C1
3670	D1
3671	D1
3680	A5
3681	A5
3682	A5
3683	A5
3684	A5
3685	A5
3690	A5
3999	G1
5400	F5
5401	E5
5402	C5
5500	A2
5605	D4
5610	B3
5612	D2
5680	B5
5690	B4
6500	B4
6501	B3
6502	B3
6503	B2
6504	A3
6505	A3
6600	D4
6605	D3
6606	D3
6608	D1
6609	D1
6611	D2
6640	D1
6641	E1
6642	E1
6651	D1
6652	C1
6654	C1
6660	B1
6661	B1
6662	C1
6663	B1
6664	C1
6665	B1
6680	A5
6681	A5
6690	A5
6691	A5
7500	B3
7501	B2
7502	A2
7520	A2
7521	A1
7608	E1
7610	D2
7640	E1
7641	E2
7650	C2
7654	D1
7660	B2
7681	A5
7684	A5
7690	A5
9520	A1
9521	A1
9606	E2
9610	C5
9667	B2
9668	B2

Pre conditioner (PR) copper side


1
2
3
4
5
A
B
C
D
E
F
G
8204 004 27846
1002
1003
PR08
PR19
PR11
PR20
PR21
PR22
PR9
PR8
PR18
PR6
PR10
PR7
PR16
PR17
RESET
GND
IN
OUT
5500
5610
5402
5401
5400
5605
2615
2616
PR09
PR15
PR14
PR13
PR12
PR5
PR4
PR3
PR30
PR31
PR1
PR2
1004
1000
1001
0314
3401
3402
3403
JU 1000
204 004 27836

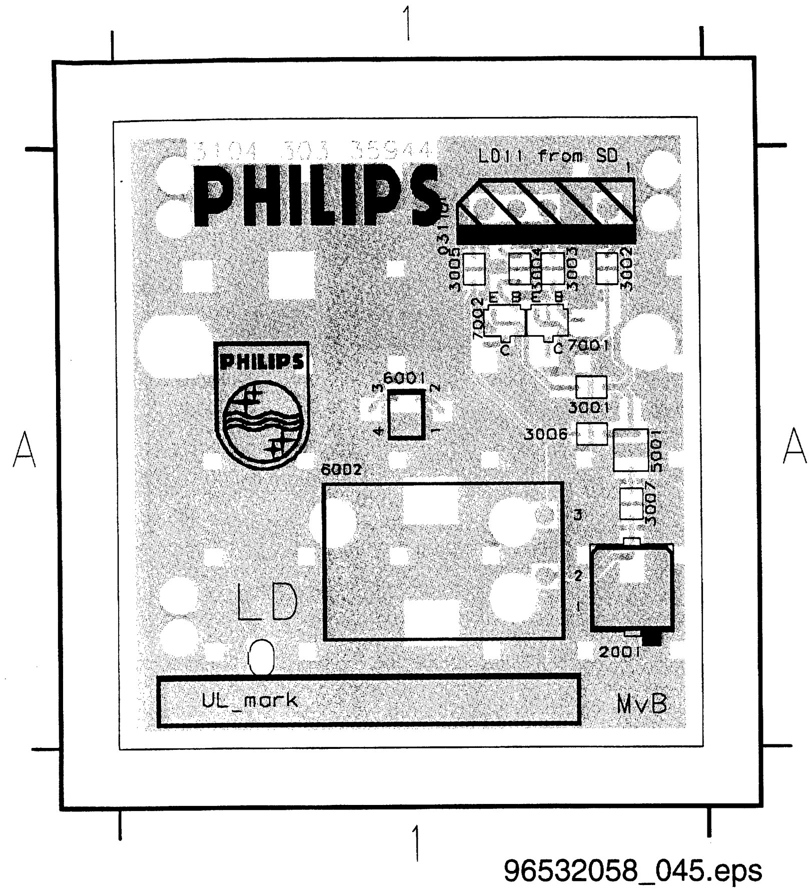
96532058_052.eps
250899

LED panel


LD
LED PANEL DISPLAY
1
2
3
4
A
B
C
From
SD
SD11
(Switch Panel
Display)
LD11
+5STBY_SWITCHED
LED
GREEN
LED RED
DIS_RC5
3003
1K
5V1
BC857B
5V2
7001
1V5
220R
3002
330R
3001
BC857B
5V1
7002
5V0
1V1
GREEN
RED
6001-A
6001-B
TLMV3100
1K
3004
10K
3006
470R
3005
47u
5001
100R
3007
2001
100u
5V1
6002
TSOP1736
VS
OUT
GND
RC5-receiver
CL 96532058_029.EPS
240899

0311	B1
2001	B4
3002	A3
3004	C3
3005	C3
3006	A3
3007	A4
3008	B2
3009	A2
5001	A4
6001	C2
6001	C3
6002	B4
7001	B2
7002	B3

LED panel (component side)

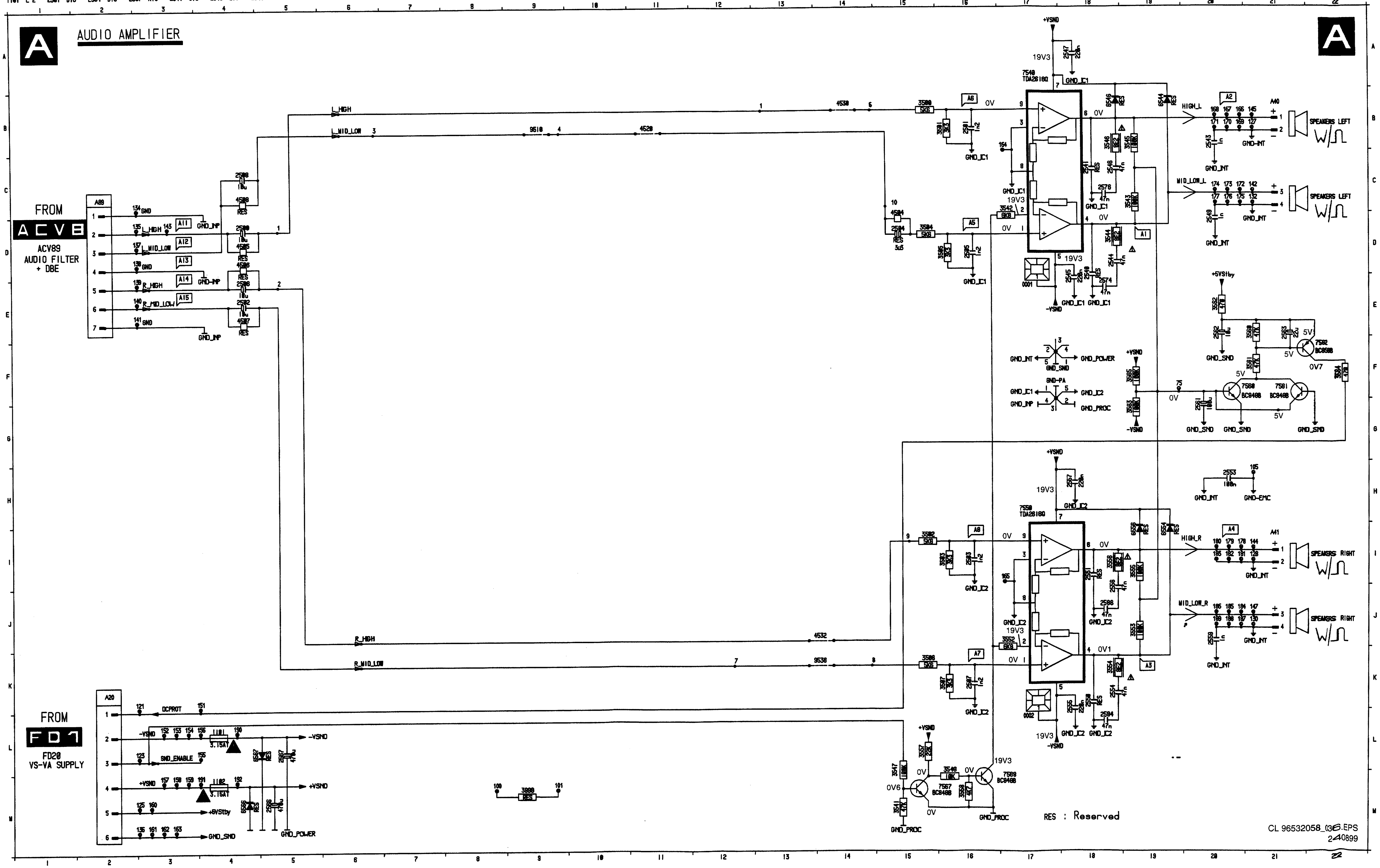

1
A
3104 303 35944
PHILIPS
LD11 from SD
0311
3005
3004
3003
3002
7002
7001
6001
3001
3006
5001
3007
6002
2001
LD
UL_mark
MvB

0311	A1
2001	A1
3001	A1
3002	A1
3003	A1
3004	A1
3005	A1
3006	A1
3007	A1
5001	A1
6001	A1
6002	A1
7001	A1
7002	A1

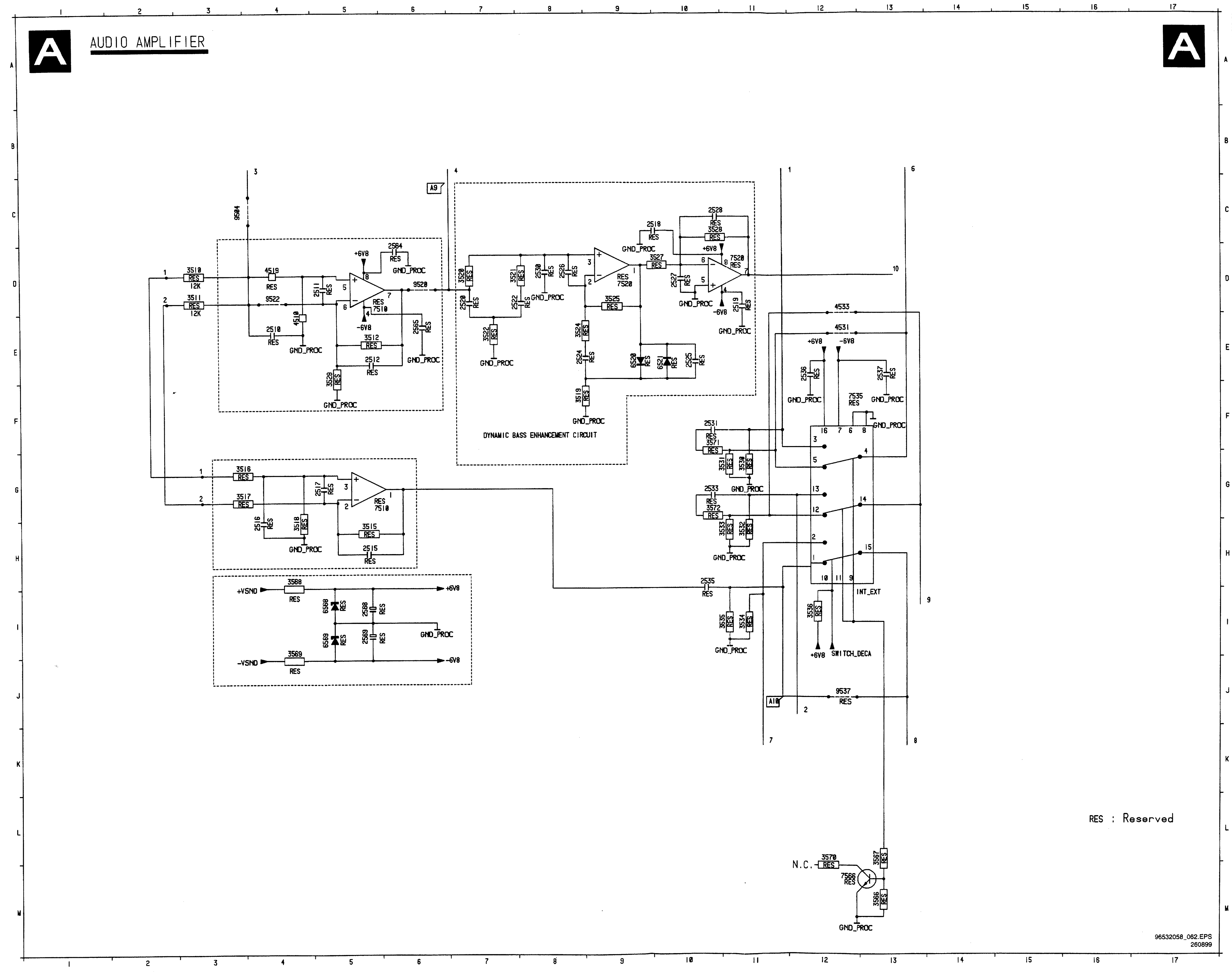
96532058_045.eps
250899

Audio amplifier A1

0001	E17
0002	L17
1101	L 2
1102	M 2
2500	D 3
2501	B16
2502	E 3
2503	I16
2504	D15
2505	D16
2506	E 3
2507	K16
2508	C 3
2540	D18
2541	C18
2543	B20
2544	D18
2545	E18
2546	C18
2547	A18
2549	D20
2550	K18
2551	I18
2553	H20
2554	K18
2555	K18
2556	J18
2557	H18
2559	J20
2561	G20
2562	E20
2563	E21
2566	M 3
2567	L 3
2574	E18
2576	C18
2584	L18
2586	J18
3500	B15
3501	B16
3502	I15
3503	I16
3504	D15
3505	D16
3506	K15
3507	K16
3541	M15
3542	C17
3543	C19
3544	D18
3545	B19
3546	B18
3547	L15
3548	M16
3552	J17
3553	J19
3554	K18
3555	I19
3556	I18
3557	L15
3558	M16
3560	E21
3561	F21
3562	E20
3563	G19
3564	F22
3565	F19
3999	M 7
4504	D15
4505	D 3
4506	D 3
4507	E 3
4508	C 3
4520	B 9
4530	B14
4532	J14
6544	B19
6546	B18
6554	I19
6556	I19
6566	M 3
6567	L 3
7540	A17
7550	H17
7560	F20
7561	F21
7562	F22
7567	M16
7568	M17
9510	B 7
9538	K14
A20	K 1
A40	B21
A41	I21
A89	C 1

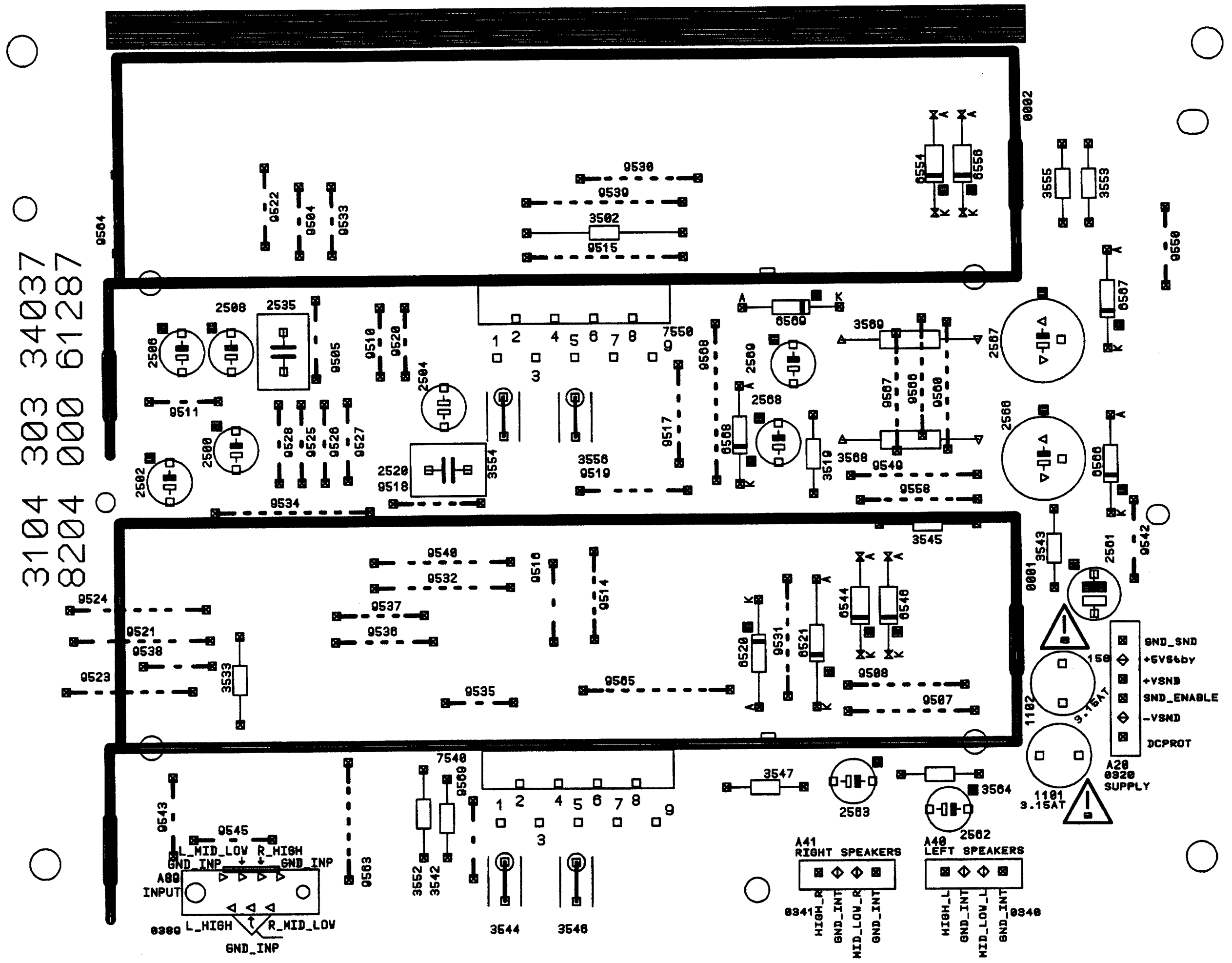

A
AUDIO AMPLIFIER
FROM
ACV8
ACV89
AUDIO FILTER
+ DBE
A89
GND
L_HIGH
L_MID_LOW
R_HIGH
R_MID_LOW
GND_INP
A11
A12
A13
A14
A15
RES
10u
+VSND
19V3
7540
TDA2616Q
7550
TDA2616Q
GND_IC1
GND_IC2
HIGH_L
MID_LOW_L
HIGH_R
MID_LOW_R
SPEAKERS LEFT
SPEAKERS RIGHT
A40
A41
GND_INT
+5VStby
7560
BC848B
7561
BC848B
7562
BC858B
GND_SND
GND_POWER
GND_PROC
GND-PA
GND-EMC
-VSND
0V
0V1
0V6
0V7
5V
7567
BC848B
7568
BC848B
FROM
FD1
FD20
VS-VA SUPPLY
A20
DCPROT
-VSND
SND_ENABLE
+VSND
+5VStby
GND_SND
3.15AT
1101
1102
3999
RES : Reserved
CL 96532058_036.EPS
240899

Audio amplifier A2


A
AUDIO AMPLIFIER
A
DYNAMIC BASS ENHANCEMENT CIRCUIT
A9
A10
INT_EXT
SWITCH_DECA
+VSND
-VSND
+6V8
-6V8
GND_PROC
N.C.
3510 RES 12K
3511 RES 12K
4519 RES
9522
9504
9520
4510
2510 RES
2511 RES
2564 RES
2565 RES
7510 RES
3512 RES
2512 RES
3529 RES
3520 RES
2520 RES
3521 RES
2522 RES
3522 RES
2530 RES
2526 RES
2518 RES
7520 RES
3527 RES
3525 RES
3524 RES
2524 RES
3519 RES
6520 RES
6521 RES
2525 RES
2528 RES
3528 RES
2527 RES
2519 RES
3516 RES
3517 RES
2516 RES
3518 RES
2517 RES
3515 RES
2515 RES
3568 RES
3569 RES
6568 RES
6569 RES
2568 RES
2569 RES
4533
4531
2536 RES
2537 RES
7535 RES
2531 RES
3571 RES
3531 RES
3530 RES
2533 RES
3572 RES
3533 RES
3532 RES
2535 RES
3535 RES
3534 RES
3536 RES
9537 RES
3570 RES
7566 RES
3567 RES
3566 RES
RES : Reserved
96532058_062.EPS
260899

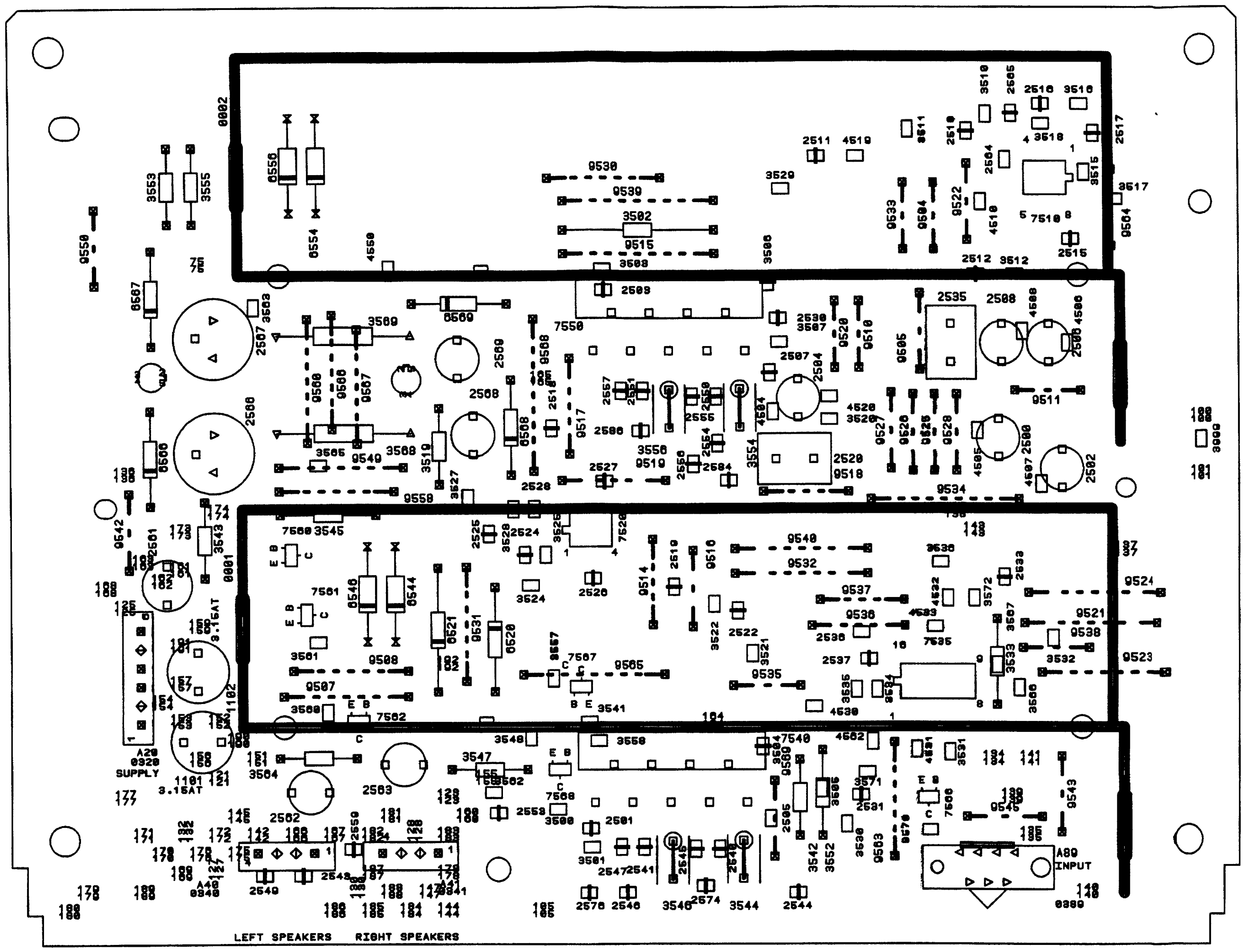
2510	E 4
2511	D 5
2512	E 5
2515	H 5
2516	H 4
2517	G 5
2518	C10
2519	D11
2520	D 7
2522	D 7
2524	E 8
2525	E10
2526	D 8
2527	D10
2528	C10
2530	D 8
2531	F10
2533	G10
2535	H10
2536	E12
2537	E13
2564	D 6
2565	E 6
2568	I 5
2569	I 5
3510	D 3
3511	D 3
3512	E 5
3515	H 5
3516	G 3
3517	G 3
3518	H 4
3519	F 8
3520	D 7
3521	D 7
3522	E 7
3524	E 8
3525	D 9
3527	D10
3528	C10
3529	E 5
3530	G11
3531	G11
3532	H11
3533	H11
3534	I11
3535	I11
3536	I12
3566	M13
3567	L13
3568	H 4
3569	I 4
3570	L12
3571	F10
3572	G10
4510	E 4
4519	D 4
4531	E12
4533	D12
6520	E 9
6521	E10
6568	I 5
6569	I 5
7510	D 5
7510	G 5
7520	D11
7520	D 9
7535	F12
7566	M12
9504	C 3
9520	D 6
9522	D 4
9537	J12

Audio amplifier (component side)


3104 303 34037
8204 000 61287
A20
0920
SUPPLY
GND_SND
+5V5tby
+VSND
SND_ENABLE
-VSND
DCPROT
3.15AT
A41
RIGHT SPEAKERS
A40
LEFT SPEAKERS
A89
INPUT
L_MID_LOW
R_HIGH
GND_INP
L_HIGH
R_MID_LOW
HIGH_R
GND_INT
MID_LOW_R
HIGH_L
MID_LOW_L

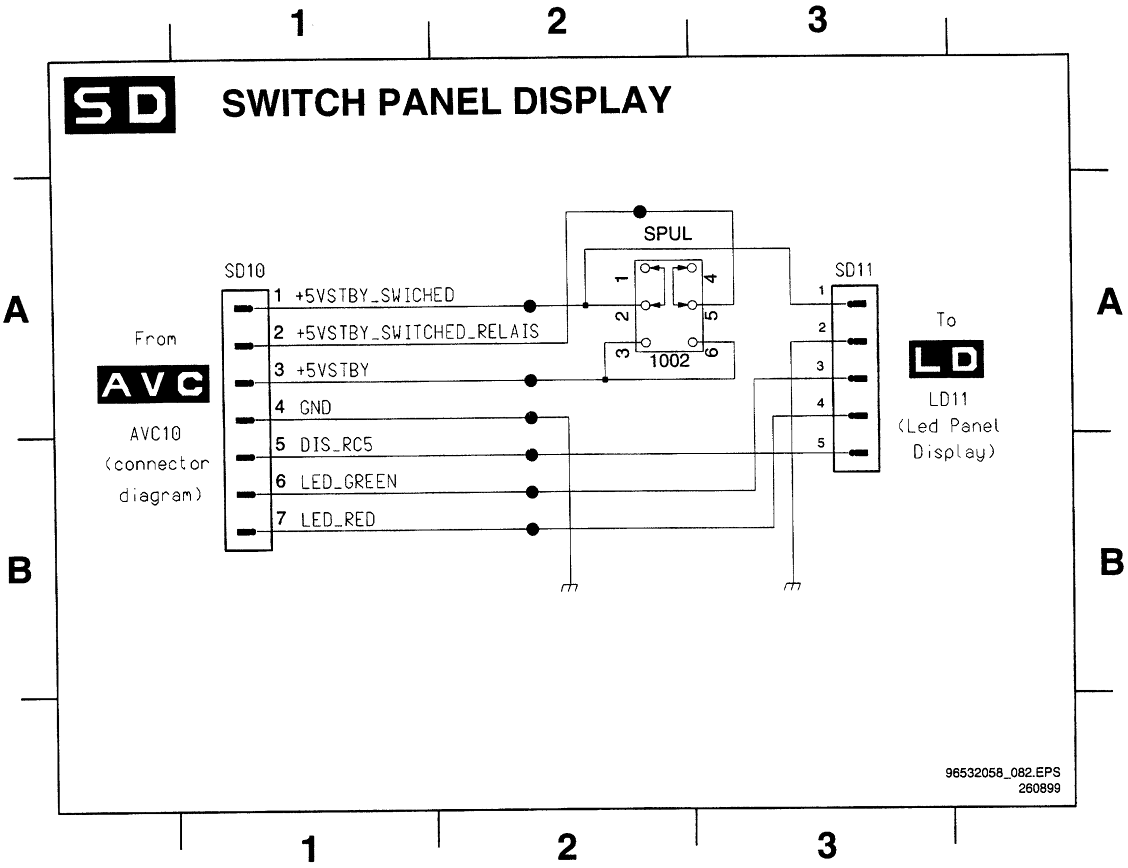
96532058_053.eps
250899

Audio amplifier (copper side)


A20
0920
SUPPLY
3.15AT
LEFT SPEAKERS
RIGHT SPEAKERS
A89
INPUT

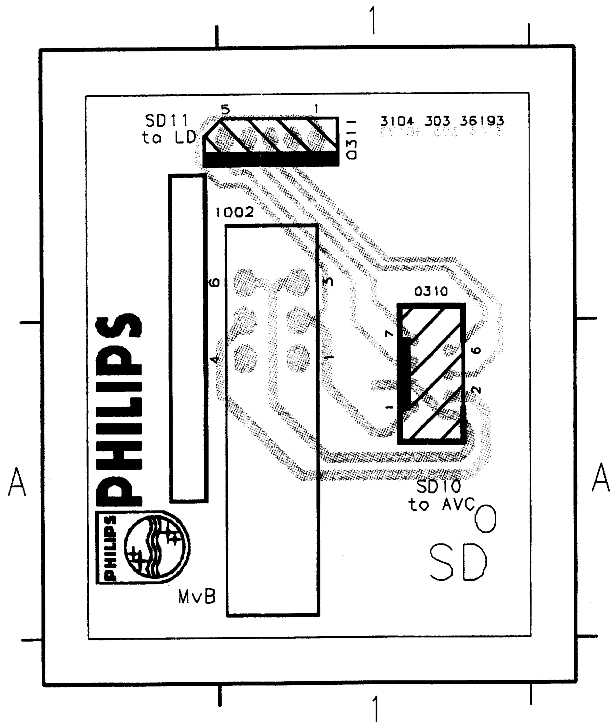
96532058_054.eps
250899

Switch panel


1
2
3
A
B
SD
SWITCH PANEL DISPLAY
SPUL
SD10
1 +5VSTBY_SWICHED
2 +5VSTBY_SWITCHED_RELAIS
3 +5VSTBY
4 GND
5 DIS_RC5
6 LED_GREEN
7 LED_RED
From
AVC
AVC10
(connector
diagram)
1002
1
2
3
4
5
6
SD11
1
2
3
4
5
To
LD
LD11
(Led Panel
Display)
96532058_082.EPS
260899

0310 A1
0311 A3
1002 A2

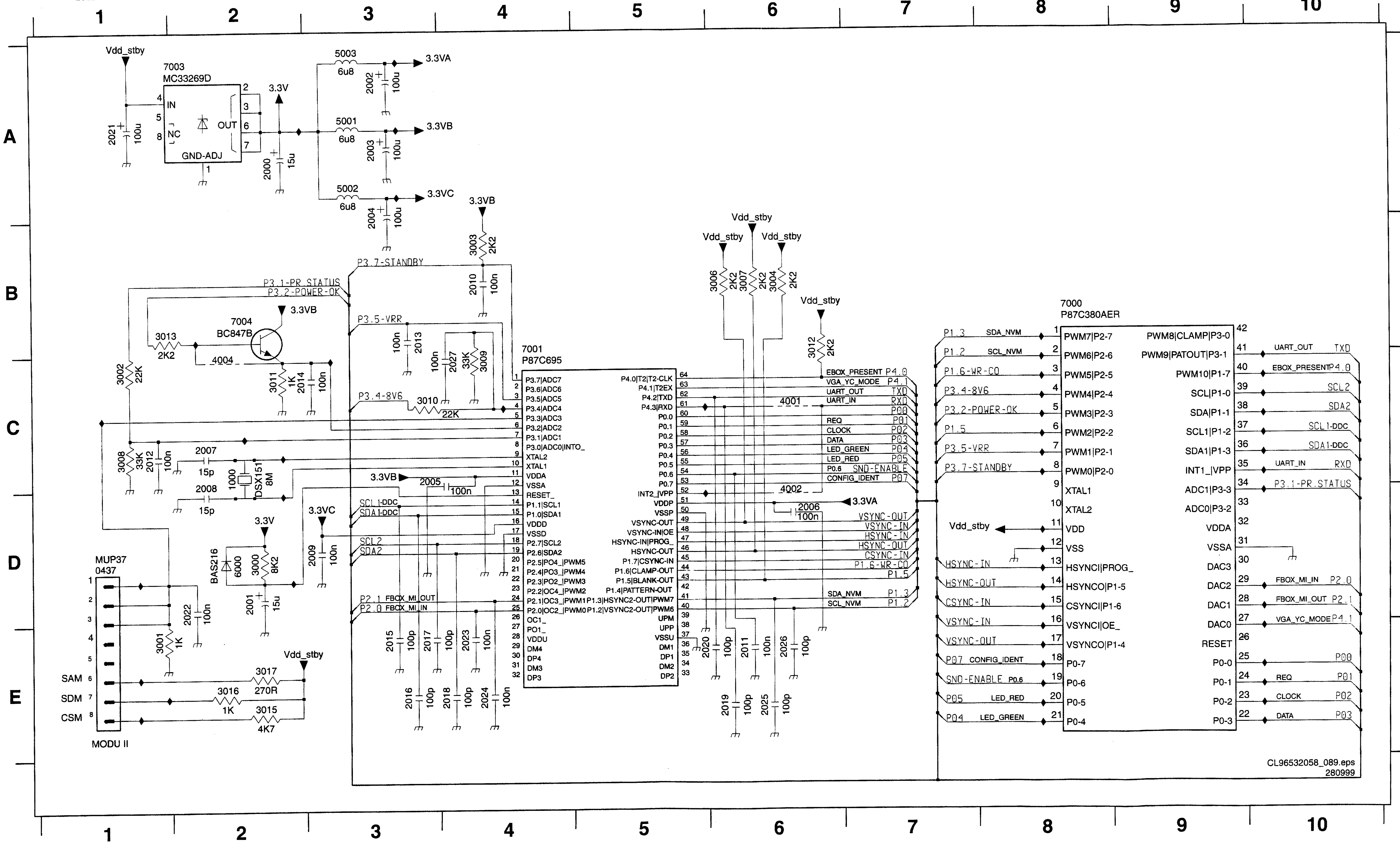
Switch panel (component side)


1
A
SD11
to LD
5
1
0311
3104 303 36193
1002
6
3
4
1
0310
7
6
1
2
PHILIPS
PHILIPS
MvB
SD10
to AVC
O
SD

96532058_055.eps
250899

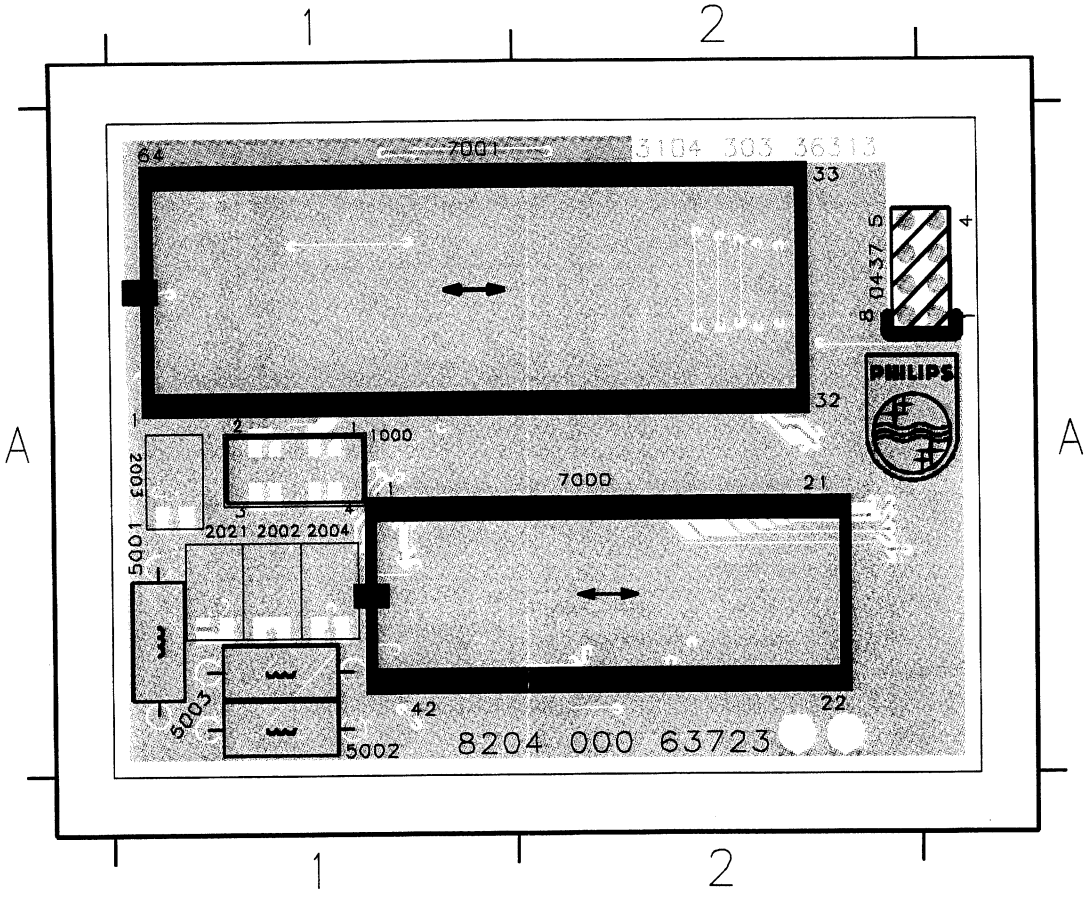
Monitor microprocessor panel

0437 D1	2003 A3	2008 C2	2013 B3	2018 E4	2023 E4	3000 D2	3006 B6	3011 C2	3017 E2	5002 A3	7003 A1
1000 C2	2004 A3	2009 D3	2014 C2	2019 E6	2024 E4	3001 D1	3007 B6	3012 B6	4001 C6	5003 A3	7004 B2
2000 A2	2005 C3	2010 B4	2015 E3	2020 E5	2025 E6	3002 C1	3008 C1	3013 B1	4002 D6	6000 D2	
2001 D2	2006 D6	2011 E6	2016 E3	2021 A1	2026 E6	3003 B4	3009 C4	3015 E2	4004 C2	7000 B8	
2002 A3	2007 C2	2012 C1	2017 E3	2022 D2	2027 C4	3004 B6	3010 C3	3016 E2	5001 A3	7001 B4	


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
Vdd_stby
7003
MC33269D
IN
NC
OUT
GND-ADJ
3.3V
5003
6u8
3.3VA
5001
3.3VB
5002
3.3VC
2021
100u
2000
15u
2002
2003
2004
100u
3003
2K2
2010
100n
P3.7-STANDBY
P3.1-PR_STATUS
P3.2-POWER-OK
7004
BC847B
3013
2K2
4004
3002
22K
3011
1K
2014
P3.5-VRR
2013
2027
3009
33K
P3.4-8V6
3010
22K
7001
P87C695
3008
33K
2012
2007
15p
1000
DSX151
8M
2008
2005
SCL1-DDC
SDA1-DDC
SCL2
SDA2
BAS216
6000
3000
8K2
2001
2009
MUP37
0437
SAM
SDM
CSM
MODU II
3001
1K
2022
3017
270R
3016
1K
3015
4K7
P2.1 FBOX_MI_OUT
P2.0 FBOX_MI_IN
2015
2016
2017
2018
2023
2024
100p
3006
3007
3004
3012
2K2
EBOX_PRESENT P4.0
VGA_YC_MODE P4.1
UART_OUT TXD
UART_IN RXD
4001
REQ
CLOCK
DATA
LED_GREEN
LED_RED
P0.6 SND-ENABLE
CONFIG_IDENT
4002
3.3VA
2006
VSYNC-OUT
VSYNC-IN
HSYNC-IN
HSYNC-OUT
CSYNC-IN
P1.6-WR-CO
SDA_NVM
SCL_NVM
2020
2011
2019
2025
2026
7000
P87C380AER
PWM7|P2-7
PWM6|P2-6
PWM5|P2-5
PWM4|P2-4
PWM3|P2-3
PWM2|P2-2
PWM1|P2-1
PWM0|P2-0
XTAL1
XTAL2
VDD
VSS
HSYNCI|PROG_
HSYNCO|P1-5
CSYNCI|P1-6
VSYNCI|OE_
VSYNCO|P1-4
P0-7
P0-6
P0-5
P0-4
PWM8|CLAMP|P3-0
PWM9|PATOUT|P3-1
PWM10|P1-7
SCL|P1-0
SDA|P1-1
SCL1|P1-2
SDA1|P1-3
INT1_|VPP
ADC1|P3-3
ADC0|P3-2
VDDA
VSSA
DAC3
DAC2
DAC1
DAC0
RESET
P0-0
P0-1
P0-2
P0-3
CL96532058_089.eps
280999

Monitor microprocessor panel (component side)

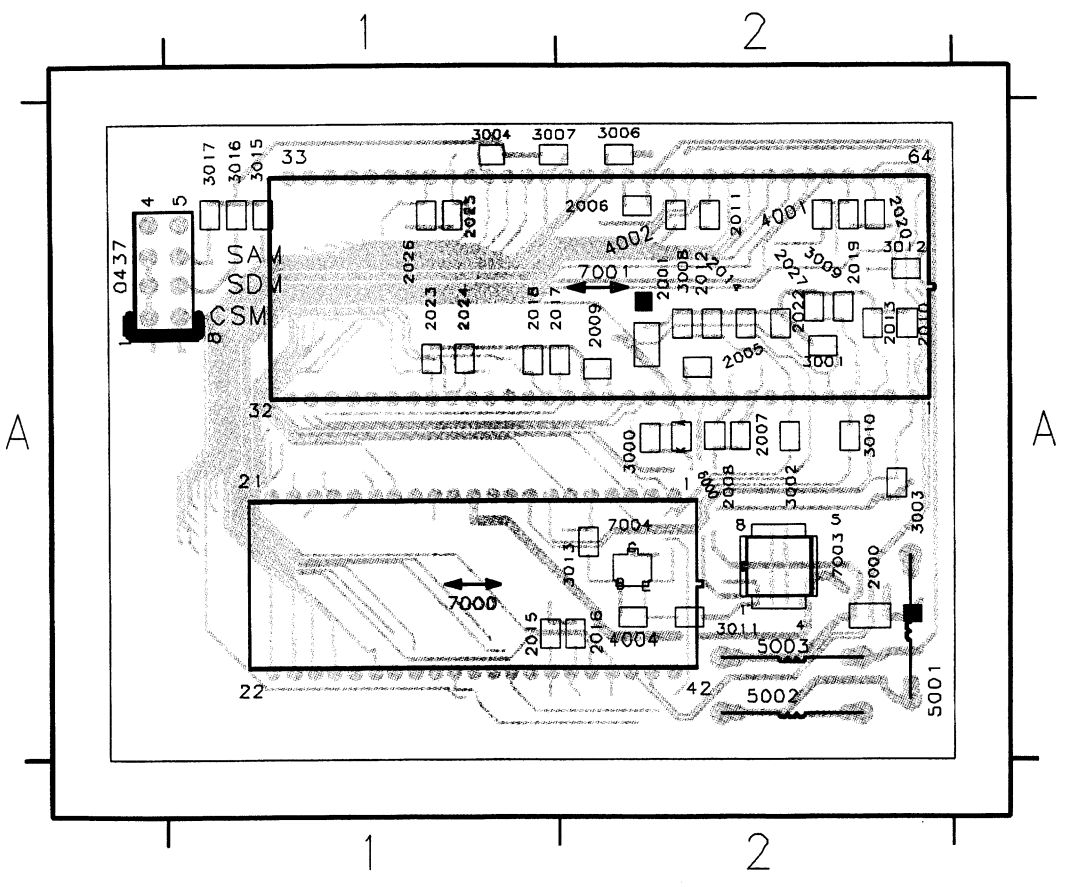
0437	A2	2003	A1	5001	A1	7000	A2
1000	A1	2004	A1	5002	A1	7001	A1
2002	A1	2021	A1	5003	A1		


1
2
A
64
7001
3104 303 36313
33
0437
5
4
8
PHILIPS
32
1000
2003
7000
21
5001
2021 2002 2004
5003
42
22
5002
8204 000 63723

96532058_058.eps
250899

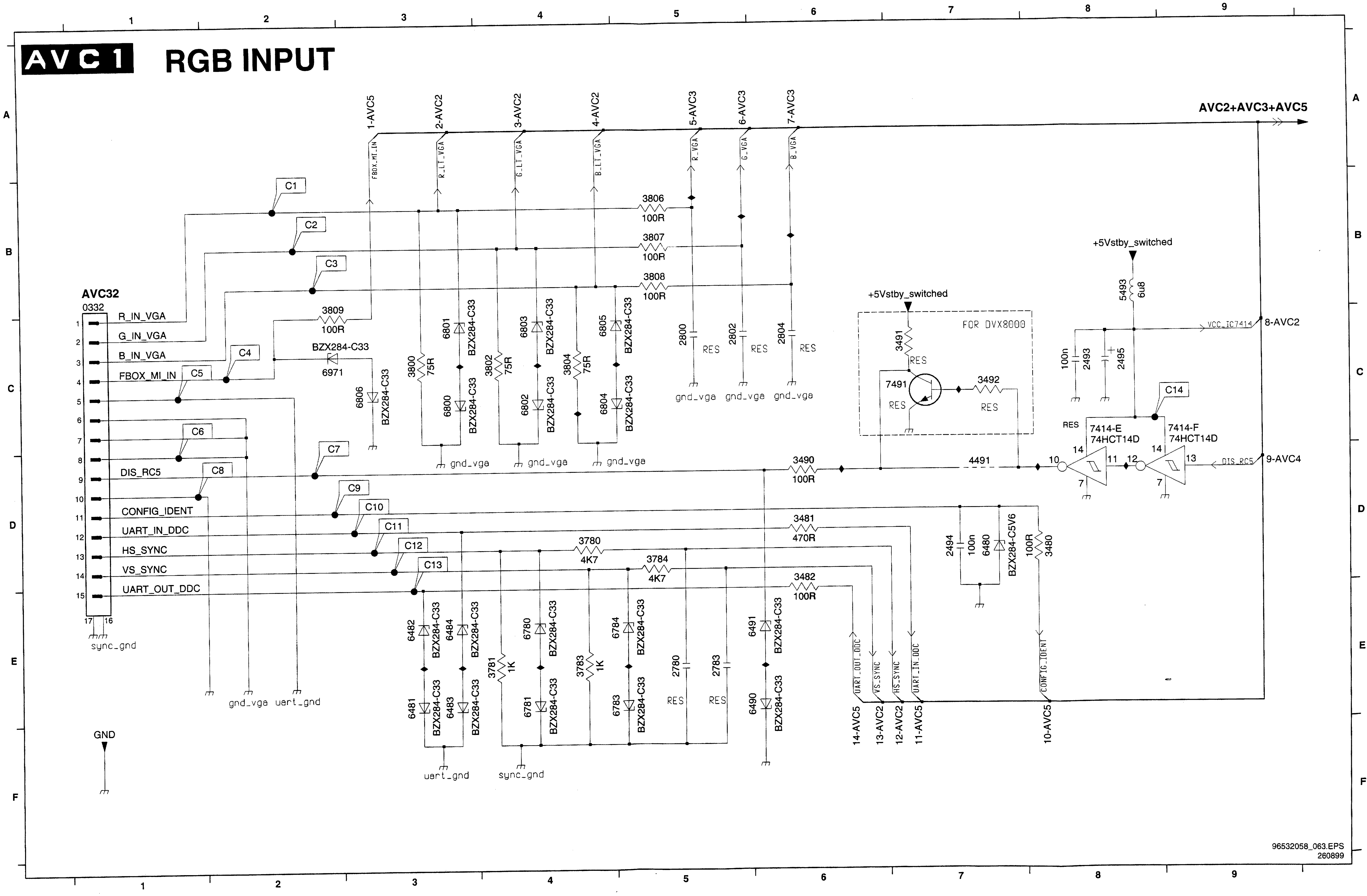
Monitor microprocessor panel (copper side)

2000	A2	2013	A2	2024	A1	3007	A1	4001	A2
2001	A2	2014	A2	2025	A1	3008	A2	4002	A2
2005	A2	2015	A1	2026	A1	3009	A2	4004	A2
2006	A2	2016	A2	2027	A2	3010	A2	6000	A2
2007	A2	2017	A1	3000	A2	3011	A2	7003	A2
2008	A2	2018	A1	3001	A2	3012	A2	7004	A2
2009	A2	2019	A2	3002	A2	3013	A2		
2010	A2	2020	A2	3003	A2	3015	A1		
2011	A2	2022	A2	3004	A1	3016	A1		
2012	A2	2023	A1	3006	A2	3017	A1		


1
2
A
3004
3007
3006
3017
3016
3015
33
64
0437
SAM
SDM
CSM
2006
4002
4001
7001
32
21
7004
7000
4004
3011
5003
5002
5001
42
22

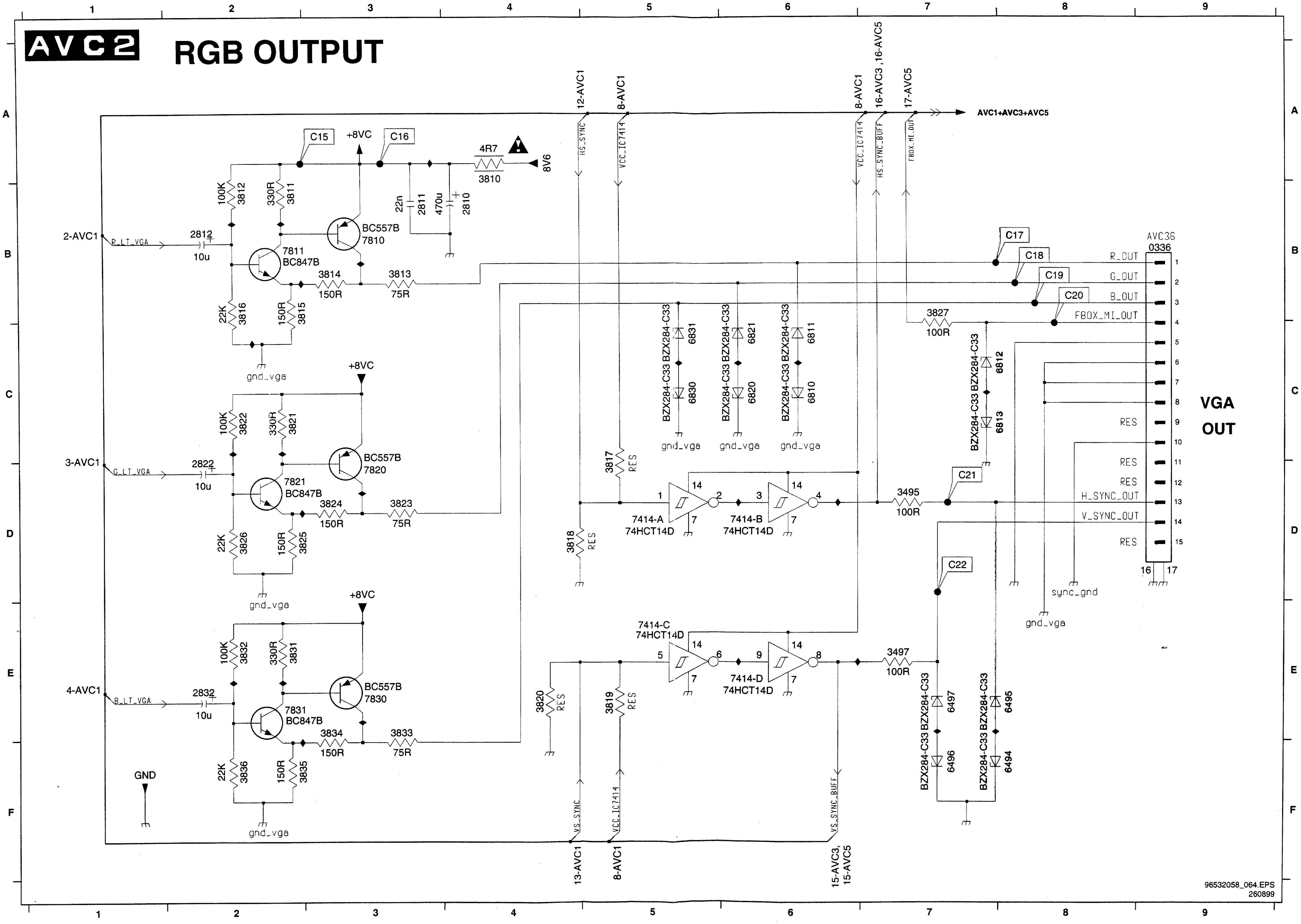
96532058_059.eps
250899

AV control


AVC 1
RGB INPUT
AVC2+AVC3+AVC5
1-AVC5
2-AVC2
3-AVC2
4-AVC2
5-AVC3
6-AVC3
7-AVC3
FBOX_MI_IN
R_LT_VGA
G_LT_VGA
B_LT_VGA
R_VGA
G_VGA
B_VGA
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
AVC32
0332
R_IN_VGA
G_IN_VGA
B_IN_VGA
FBOX_MI_IN
DIS_RC5
CONFIG_IDENT
UART_IN_DDC
HS_SYNC
VS_SYNC
UART_OUT_DDC
sync_gnd
gnd_vga
uart_gnd
GND
3806 100R
3807 100R
3808 100R
3809 100R
BZX284-C33
6971
6806 BZX284-C33
3800 75R
3802 75R
3804 75R
6800 BZX284-C33
6801 BZX284-C33
6802 BZX284-C33
6803 BZX284-C33
6804 BZX284-C33
6805 BZX284-C33
2800 RES
2802 RES
2804 RES
+5Vstby_switched
FOR DVX8000
3491 RES
7491 RES
3492 RES
3490 100R
4491
5493 6u8
2493 100n
2495
VCC_IC7414
8-AVC2
RES
7414-E 74HCT14D
7414-F 74HCT14D
DIS_RC5
9-AVC4
3481 470R
3780 4K7
3784 4K7
3482 100R
2494 100n
6480 BZX284-C5V6
3480 100R
6482 BZX284-C33
6484 BZX284-C33
6481 BZX284-C33
6483 BZX284-C33
3781 1K
3783 1K
6780 BZX284-C33
6781 BZX284-C33
6784 BZX284-C33
6783 BZX284-C33
2780 RES
2783 RES
6491 BZX284-C33
6490 BZX284-C33
UART_OUT_DDC
VS_SYNC
HS_SYNC
UART_IN_DDC
CONFIG_IDENT
14-AVC5
13-AVC2
12-AVC2
11-AVC5
10-AVC5
96532058_063.EPS
260899

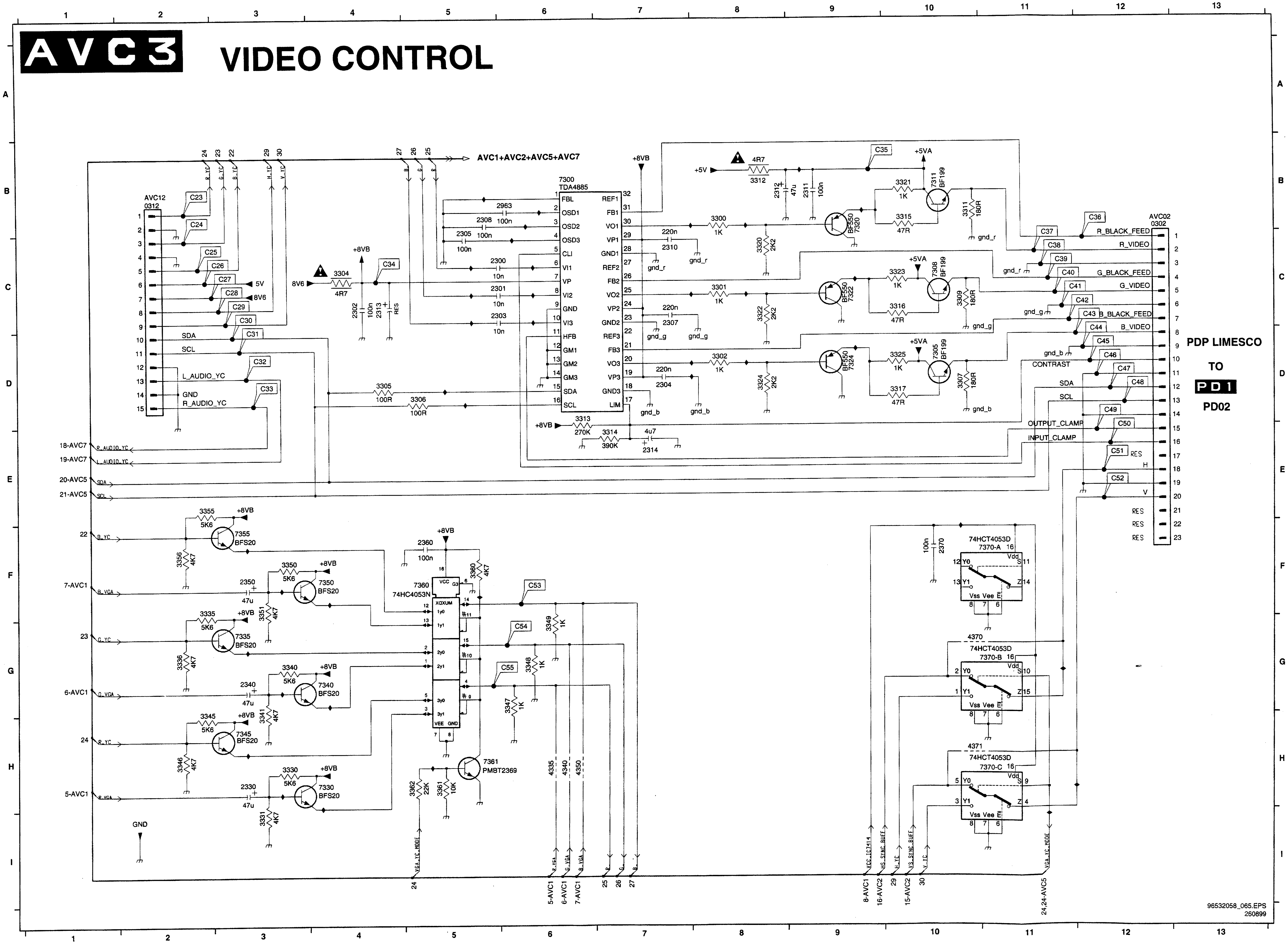
0332	B1
2493	C9
2494	D7
2495	C9
2780	E5
2783	E5
2800	C5
2802	C6
2804	C6
3480	D8
3481	D6
3482	E6
3490	D6
3491	C7
3492	C8
3780	D4
3781	E4
3783	E4
3784	E5
3800	C3
3802	C4
3804	C4
3806	B5
3807	B5
3808	B5
3809	B2
4491	D7
5493	C8
6480	D8
6481	E3
6482	E3
6483	E3
6484	E3
6490	E6
6491	E6
6780	E4
6781	E4
6783	E5
6784	E5
6800	C3
6801	C3
6802	C4
6803	C4
6804	C5
6805	C5
6806	C3
6971	C2
7414-E	D8
7414-F	D9
7491	C7

AV control


AVC2
RGB OUTPUT
12-AVC1
8-AVC1
8-AVC1
16-AVC3 ,16-AVC5
17-AVC5
AVC1+AVC3+AVC5
HS_SYNC
VCC_IC7414
VCC_IC7414
HS_SYNC_BUFF
FBOX_MI_OUT
C15
+8VC
C16
4R7
3810
8V6
100K 3812
330R 3811
22n 2811
470u 2810
BC557B 7810
2-AVC1
R_LT_VGA
2812
10u
7811 BC847B
3814 150R
3813 75R
22K 3816
150R 3815
gnd_vga
+8VC
100K 3822
330R 3821
BC557B 7820
3-AVC1
G_LT_VGA
2822
10u
7821 BC847B
3824 150R
3823 75R
22K 3826
150R 3825
gnd_vga
+8VC
100K 3832
330R 3831
BC557B 7830
4-AVC1
B_LT_VGA
2832
10u
7831 BC847B
3834 150R
3833 75R
22K 3836
150R 3835
gnd_vga
GND
BZX284-C33 6831
BZX284-C33 6830
BZX284-C33 6821
BZX284-C33 6820
BZX284-C33 6811
BZX284-C33 6810
gnd_vga
gnd_vga
gnd_vga
3817 RES
3818 RES
7414-A 74HCT14D
7414-B 74HCT14D
7414-C 74HCT14D
7414-D 74HCT14D
3495 100R
3497 100R
3827 100R
BZX284-C33 6812
BZX284-C33 6813
C17
C18
C19
C20
C21
C22
AVC36
0336
R_OUT
G_OUT
B_OUT
FBOX_MI_OUT
RES
RES
RES
H_SYNC_OUT
V_SYNC_OUT
RES
16 17
sync_gnd
gnd_vga
VGA OUT
3820 RES
3819 RES
BZX284-C33 6497
BZX284-C33 6496
BZX284-C33 6495
BZX284-C33 6494
VS_SYNC
VCC_IC7414
VS_SYNC_BUFF
13-AVC1
8-AVC1
15-AVC3, 15-AVC5
96532058_064.EPS
260899

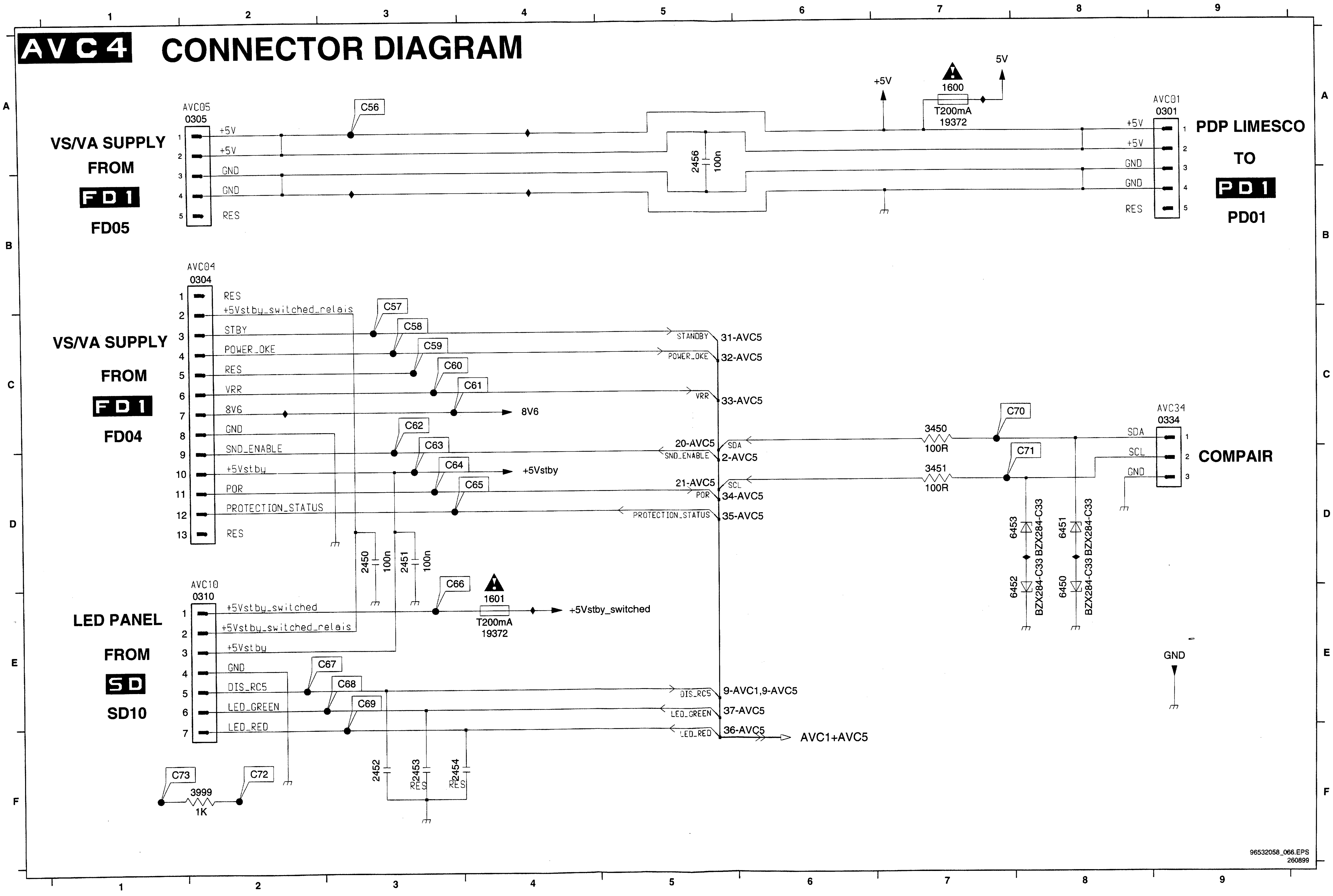
0336	B8
2810	A6
2811	A6
2812	B4
2822	C2
2832	E2
3495	D7
3497	E7
3810	A5
3811	A5
3812	A4
3813	B6
3814	B5
3815	B5
3816	B4
3817	D5
3818	D5
3819	E5
3820	E5
3821	B3
3822	B3
3823	C4
3824	C3
3825	C3
3826	C3
3827	B7
3831	D2
3832	D2
3833	E3
3834	E3
3835	E3
3836	E2
6494	F7
6495	E7
6496	F7
6497	E7
6810	C6
6811	C6
6812	C7
6813	C7
6820	C6
6821	C6
6830	C6
6831	C6
7414-A	D5
7414-B	D6
7414-C	E5
7414-D	E6
7810	B5
7811	B5
7820	C4
7821	C3
7830	E3
7831	E2

AV control


AVC3
VIDEO CONTROL
AVC12 0312
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
C33
5V
8V6
SDA
SCL
L_AUDIO_YC
GND
R_AUDIO_YC
AVC1+AVC2+AVC5+AVC7
7300 TDA4885
FBL
OSD1
OSD2
OSD3
CLI
VI1
VP
VI2
GND
VI3
HFB
GM1
GM2
GM3
SDA
SCL
REF1
FB1
VO1
VP1
GND1
REF2
FB2
VO2
VP2
GND2
REF3
FB3
VO3
VP3
GND3
LIM
+8VB
+5V
4R7
3312
C35
+5VA
7311 BF199
7320 BF550
7308 BF199
7322 BF550
7305 BF199
7324 BF550
3304 4R7
3313 270K
3314 390K
2314 4u7
C34
C36
C37
C38
C39
C40
C41
C42
C43
C44
C45
C46
C47
C48
C49
C50
C51
C52
R_BLACK_FEED
R_VIDEO
G_BLACK_FEED
G_VIDEO
B_BLACK_FEED
B_VIDEO
CONTRAST
OUTPUT_CLAMP
INPUT_CLAMP
RES
H
V
AVC02 0302
PDP LIMESCO
TO
PD1
PD02
18-AVC7
19-AVC7
20-AVC5
21-AVC5
22
7-AVC1
23
6-AVC1
24
5-AVC1
7355 BFS20
7350 BFS20
7335 BFS20
7340 BFS20
7345 BFS20
7330 BFS20
7360 74HC4053N
7361 PMBT2369
C53
C54
C55
74HCT4053D 7370-A
74HCT4053D 7370-B
74HCT4053D 7370-C
4370
4371
GND
VGA_YC_MODE
8-AVC1
16-AVC2
15-AVC2
24.24-AVC5
96532058_065.EPS
260899

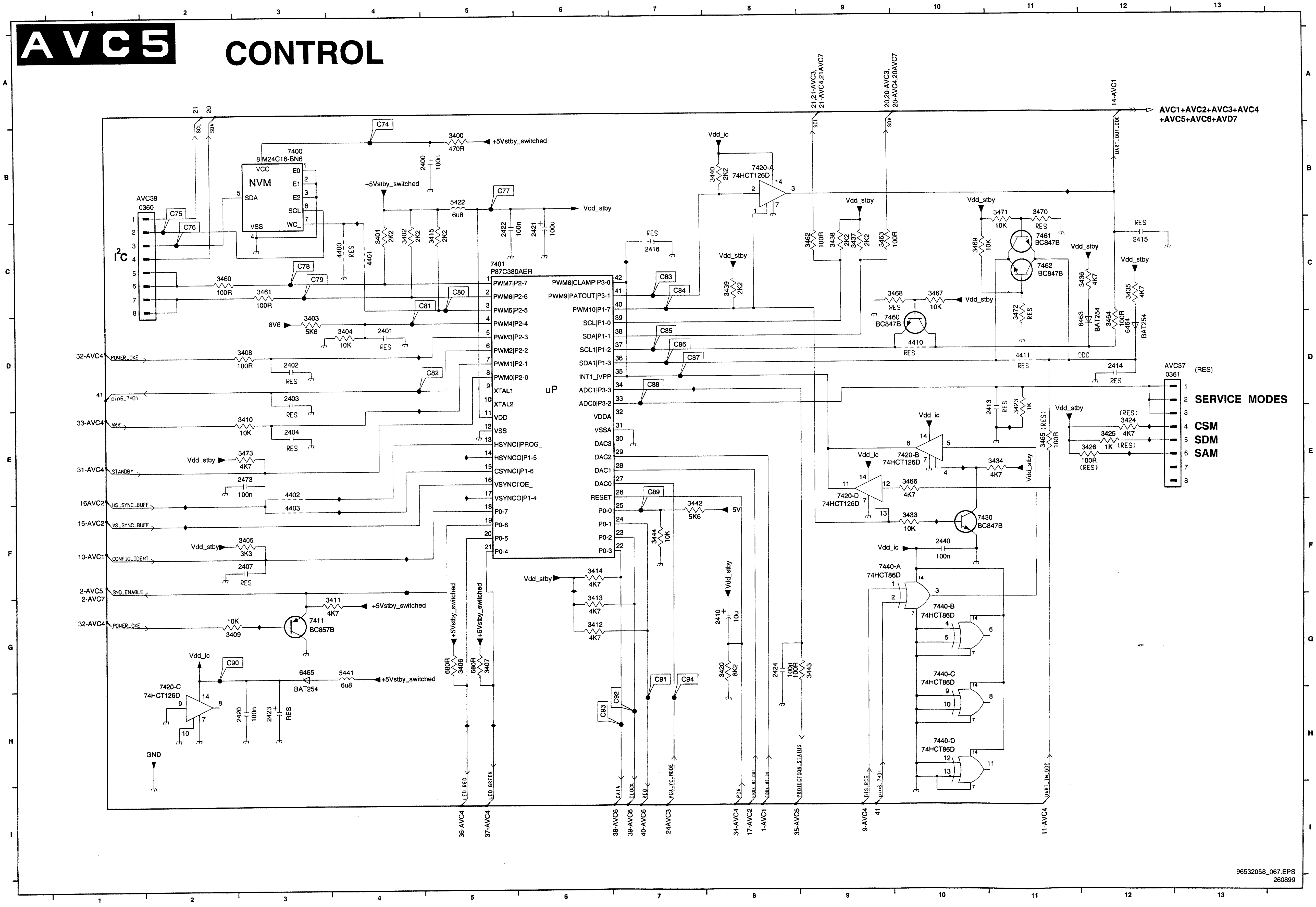
0302	B12
0312	B2
2300	B5
2301	C5
2302	C4
2303	C5
2304	E7
2305	B5
2307	D8
2308	B5
2310	B8
2311	A10
2312	A10
2313	C5
2314	D7
2330	H3
2340	F3
2350	E3
2360	E5
2370	G10
2963	B5
3300	B8
3301	C7
3302	E8
3304	B4
3305	D5
3306	D5
3307	E10
3309	D10
3311	B10
3312	A11
3313	D6
3314	D7
3315	B9
3316	C9
3317	D9
3320	B8
3321	A9
3322	D8
3323	C9
3324	E8
3325	D9
3330	G4
3331	H4
3335	G3
3336	G3
3340	F4
3341	G4
3345	H3
3346	H3
3347	G6
3348	F6
3349	F6
3350	E4
3351	E4
3355	E3
3356	F3
3360	F6
3361	I5
3362	H5
4335	E6
4340	E6
4350	E6
4370	G9
4371	I9
7300	B6
7305	D10
7308	C10
7311	B10
7320	B8
7322	C8
7324	D8
7330	H4
7335	G3
7340	F4
7345	H3
7350	E4
7355	E3
7360	F6
7361	H6
7370-A	G11
7370-B	G9
7370-C	H9

AV control


AVC4 CONNECTOR DIAGRAM
VS/VA SUPPLY FROM FD1 FD05
AVC05 0305
+5V
+5V
GND
GND
RES
C56
2456 100n
+5V
5V
1600 T200mA 19372
AVC01 0301
PDP LIMESCO TO PD1 PD01
VS/VA SUPPLY FROM FD1 FD04
AVC04 0304
RES
+5Vstby_switched_relais
STBY
POWER_OKE
RES
VRR
8V6
GND
SND_ENABLE
+5Vstby
POR
PROTECTION_STATUS
RES
C57 C58 C59 C60 C61 C62 C63 C64 C65
STANDBY 31-AVC5
POWER_OKE 32-AVC5
VRR 33-AVC5
8V6
20-AVC5 SDA
SND_ENABLE 2-AVC5
+5Vstby
21-AVC5 SCL
POR 34-AVC5
PROTECTION_STATUS 35-AVC5
2450 100n
2451 100n
3450 100R
3451 100R
C70 C71
AVC34 0334
SDA SCL GND
COMPAIR
6453 BZX284-C33
6452 BZX284-C33
6451 BZX284-C33
6450 BZX284-C33
LED PANEL FROM SD SD10
AVC10 0310
+5Vstby_switched
+5Vstby_switched_relais
+5Vstby
GND
DIS_RC5
LED_GREEN
LED_RED
C66
1601 T200mA 19372
+5Vstby_switched
C67 C68 C69
DIS_RC5 9-AVC1,9-AVC5
LED_GREEN 37-AVC5
LED_RED 36-AVC5
AVC1+AVC5
2452
2453 RES
2454 RES
C73 C72
3999 1K
GND
96532058_066.EPS 260899

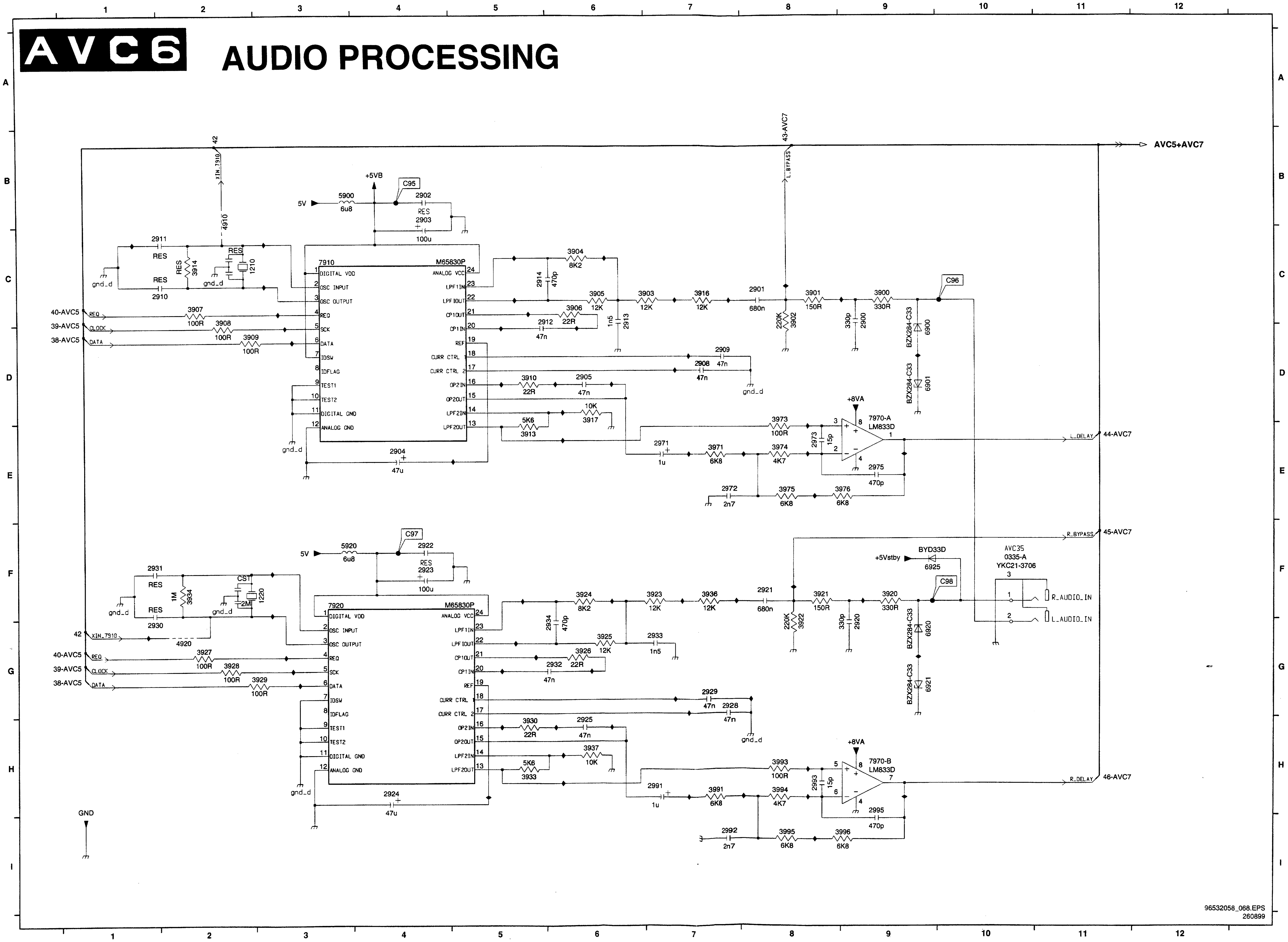
0301	A9
0304	B2
0305	A2
0310	E2
0334	C9
1600	A7
1601	E4
2450	D3
2451	D3
2452	F3
2453	F3
2454	F3
2456	A5
3450	C7
3451	D7
3999	F2
6450	E8
6451	D8
6452	E8
6453	D8

AV control


AVC5
CONTROL
7400 M24C16-BN6 NVM
VCC E0 E1 E2 SDA SCL WC_ VSS
AVC39 0360
I²C
C74 C75 C76 C77 C78 C79 C80 C81 C82 C83 C84 C85 C86 C87 C88 C89 C90 C91 C92 C93 C94
3400 470R +5Vstby_switched
5422 6u8 Vdd_stby
7401 P87C380AER
uP
PWM7|P2-7 PWM6|P2-6 PWM5|P2-5 PWM4|P2-4 PWM3|P2-3 PWM2|P2-2 PWM1|P2-1 PWM0|P2-0 XTAL1 XTAL2 VDD VSS HSYNCI|PROG_ HSYNCO|P1-5 CSYNCI|P1-6 VSYNCI|OE_ VSYNCO|P1-4 P0-7 P0-6 P0-5 P0-4
PWM8|CLAMP|P3-0 PWM9|PATOUT|P3-1 PWM10|P1-7 SCL|P1-0 SDA|P1-1 SCL1|P1-2 SDA1|P1-3 INT1_|VPP ADC1|P3-3 ADC0|P3-2 VDDA VSSA DAC3 DAC2 DAC1 DAC0 RESET P0-0 P0-1 P0-2 P0-3
32-AVC4 POWER_OKE
41 pin6_7401
33-AVC4 VRR
31-AVC4 STANDBY
16AVC2 HS_SYNC_BUFF
15-AVC2 VS_SYNC_BUFF
10-AVC1 CONFIG_IDENT
2-AVC5, 2-AVC7 SND_ENABLE
32-AVC4 POWER_OKE
7411 BC857B
7420-C 74HCT126D
6465 BAT254
5441 6u8
GND
7420-A 74HCT126D
7420-B 74HCT126D
7420-D 74HCT126D
7430 BC847B
7460 BC847B
7461 BC847B
7462 BC847B
7440-A 74HCT86D
7440-B 74HCT86D
7440-C 74HCT86D
7440-D 74HCT86D
AVC1+AVC2+AVC3+AVC4 +AVC5+AVC6+AVD7
21,21-AVC3, 21-AVC4,21AVC7
20,20-AVC3, 20-AVC4,20AVC7
14-AVC1 UART_OUT_DDC
AVC37 0361 (RES)
SERVICE MODES
CSM
SDM
SAM
LED_RED LED_GREEN DATA CLOCK RED VGA_YC_MODE POR EBOX_HE_OUT EBOX_HE_IN PROTECTION_STATUS DIS_RES pin6_7401 UART_IN_DDC
36-AVC4 37-AVC4 38-AVC6 39-AVC6 40-AVC6 24AVC3 34-AVC4 17-AVC2 1-AVC1 35-AVC5 9-AVC4 41 11-AVC4
96532058_067.EPS
260899

0360	B2
0361	D12
2400	B5
2401	D4
2402	D3
2403	D3
2404	E3
2407	F3
2410	G8
2413	E11
2414	D12
2415	C12
2416	C7
2420	H3
2421	C6
2422	C5
2423	H3
2424	G8
2440	F10
2473	E3
3400	B5
3401	C4
3402	C4
3403	D3
3404	D4
3405	F3
3406	G5
3407	G5
3408	D3
3409	G2
3410	E3
3411	G4
3412	F6
3413	G6
3414	G6
3415	C5
3420	G8
3423	E11
3424	E12
3425	E12
3426	E12
3433	F10
3434	E11
3435	C12
3436	C12
3437	C9
3438	C9
3439	C8
3440	B8
3442	F7
3443	G9
3444	F7
3460	C2
3461	C3
3462	C9
3463	C9
3464	D12
3465	E11
3466	E10
3467	C10
3468	C10
3469	C10
3470	B11
3471	B11
3472	D11
3473	E3
4400	C4
4401	C4
4402	E3
4403	F3
4410	D10
4411	D11
5422	B5
5441	G4
6463	D12
6464	D12
6465	G3
7400	B3
7401	C5
7411	G3
7420-A	B8
7420-B	E10
7420-C	G2
7420-D	E9
7430	F10
7440-A	F9
7440-B	G10
7440-C	G10
7440-D	H10
7460	D9
7461	C11
7462	C11

AV control


AVC6
AUDIO PROCESSING
AVC5+AVC7
43-AVC7
L_BYPASS
XIN_7910
4910
+5VB
C95
5V
5900
6u8
2902
RES
2903
100u
2911
RES
3914
RES
1210
2910
gnd_d
7910
M65830P
DIGITAL VDD
OSC INPUT
OSC OUTPUT
REQ
SCK
DATA
IDSW
IDFLAG
TEST1
TEST2
DIGITAL GND
ANALOG GND
ANALOG VCC
LPF1IN
LPF1OUT
CP1OUT
CP1IN
REF
CURR CTRL
CURR CTRL 2
OP2IN
OP2OUT
LPF2IN
LPF2OUT
40-AVC5
39-AVC5
38-AVC5
3907 100R
3908 100R
3909 100R
3904 8K2
2914 470p
3905 12K
3906 22R
2912 47n
2913 1n5
3903 12K
3916 12K
2901 680n
3902 220K
3901 150R
2900 330p
3900 330R
C96
6900 BZX284-C33
6901 BZX284-C33
2909 47n
2908 47n
3910 22R
2905 47n
3917 10K
3913 5K6
2904 47u
+8VA
7970-A LM833D
3973 100R
2973 15p
2971 1u
3971 6K8
3974 4K7
2975 470p
2972 2n7
3975 6K8
3976 6K8
L_DELAY
44-AVC7
R_BYPASS
45-AVC7
C97
5920 6u8
2922 RES
2923 100u
2931 RES
3934 1M
CST 2M
1220
2930 RES
42
XIN_7910
4920
3927 100R
3928 100R
3929 100R
7920
M65830P
3924 8K2
2934 470p
3925 12K
3926 22R
2932 47n
2933 1n5
3923 12K
3936 12K
2921 680n
3922 220K
3921 150R
2920 330p
3920 330R
C98
6920 BZX284-C33
6921 BZX284-C33
BYD33D
+5Vstby
6925
AVC35
0335-A
YKC21-3706
R_AUDIO_IN
L_AUDIO_IN
2929 47n
2928 47n
3930 22R
2925 47n
3937 10K
3933 5K6
2924 47u
7970-B LM833D
3993 100R
2993 15p
2991 1u
3991 6K8
3994 4K7
2995 470p
2992 2n7
3995 6K8
3996 6K8
R_DELAY
46-AVC7
GND
96532058_068.EPS
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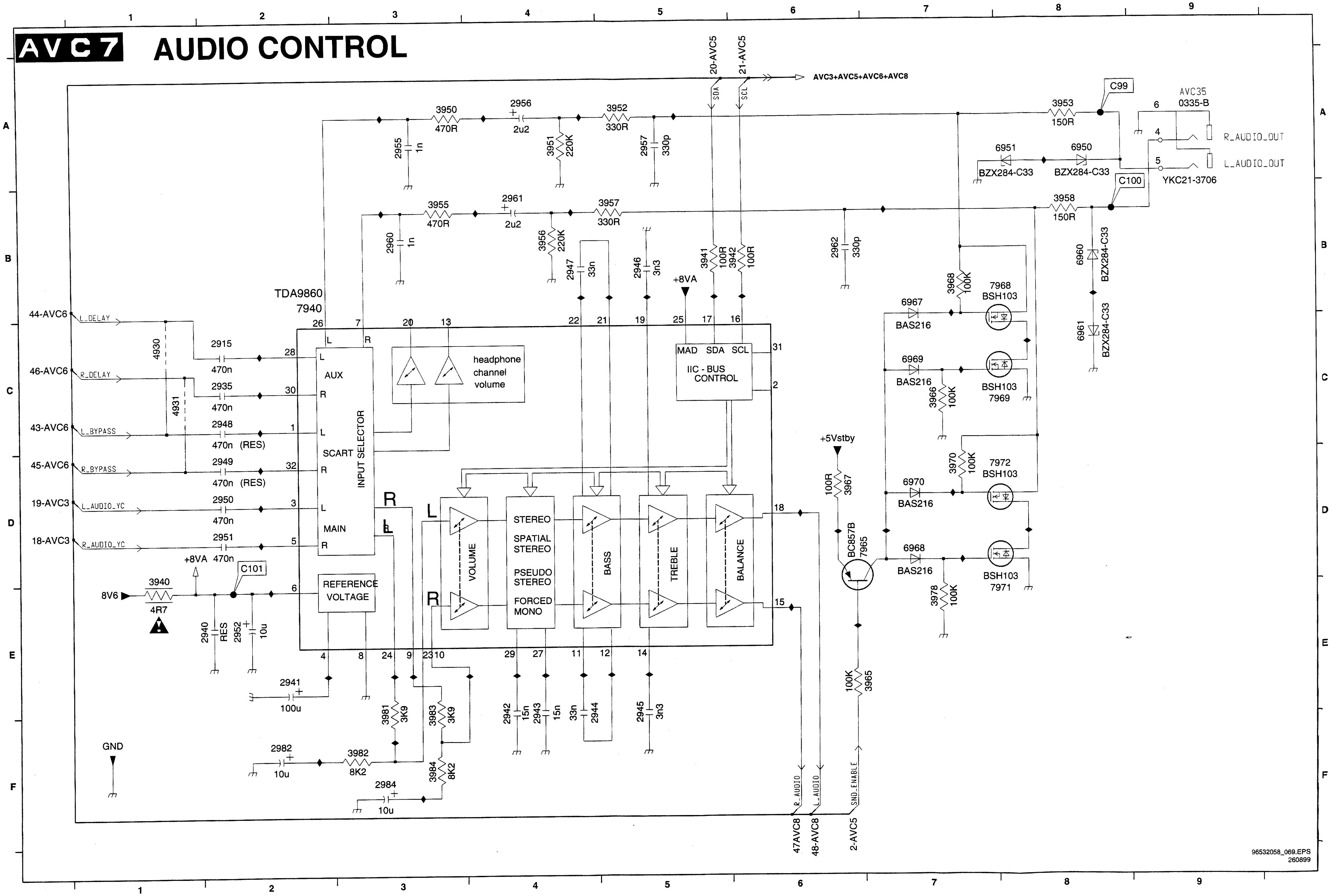
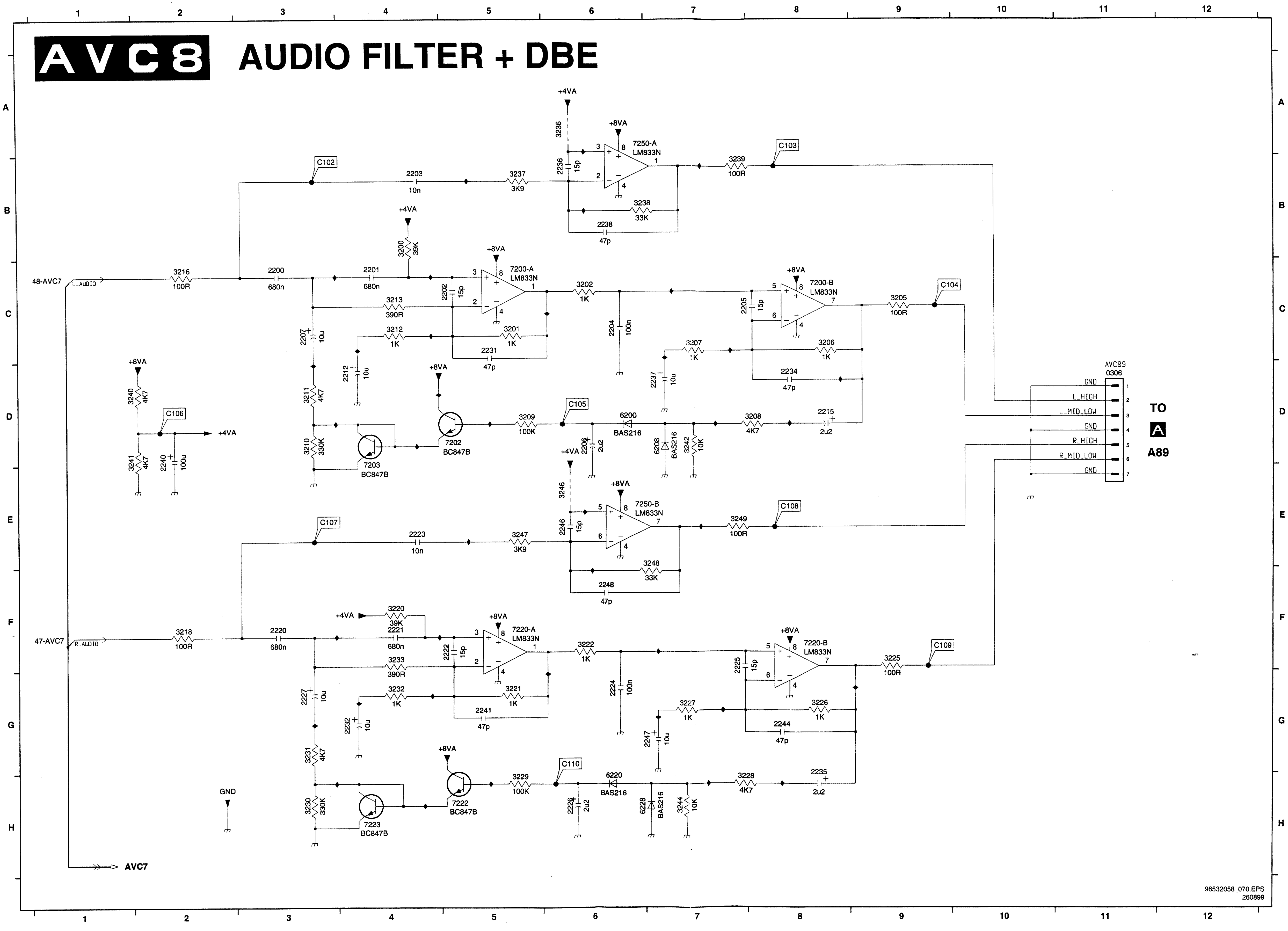
0335-A	E12
1210	B2
1220	F2
2900	A8
2901	A8
2902	A4
2903	A4
2904	C4
2905	B6
2908	B7
2909	B7
2910	C3
2911	C1
2912	B6
2913	B6
2914	A6
2920	F8
2921	E8
2922	E5
2923	E4
2924	G4
2925	G6
2928	G7
2929	F7
2930	G3
2931	G1
2932	F6
2933	F7
2934	F6
2971	C10
2972	D10
2973	C11
2975	D11
2991	H10
2992	I10
2993	H11
2995	H11
3900	A8
3901	A8
3902	A8
3903	A7
3904	A6
3905	B6
3906	B6
3907	B3
3908	B3
3909	B3
3910	B6
3913	C6
3914	C2
3916	A7
3917	C6
3920	E8
3921	E8
3922	F8
3923	E7
3924	E6
3925	F6
3926	F6
3927	F3
3928	F3
3929	F3
3930	G6
3933	G6
3934	G2
3936	E7
3937	G6
3971	C10
3973	C11
3974	C11
3975	D11
3976	D11
3991	H10
3993	G11
3994	H11
3995	H11
3996	H11
4910	B1
4920	G3
5900	A3
5920	E4
6900	A9
6901	B9
6920	F9
6921	F9
6925	E11
7910	A4
7920	F4
7970-A	C11
7970-B	G11

AV control


AVC7
AUDIO CONTROL
20-AVC5
21-AVC5
SDA
SCL
AVC3+AVC5+AVC6+AVC8
3950 470R
2956 2u2
3952 330R
2955 1n
3951 220K
2957 330p
3953 150R
C99
AVC35 0335-B
R_AUDIO_OUT
L_AUDIO_OUT
YKC21-3706
6951 BZX284-C33
6950 BZX284-C33
C100
3955 470R
2961 2u2
3957 330R
3958 150R
2960 1n
3956 220K
2947 33n
2946 3n3
3941 100R
3942 100R
2962 330p
6960 BZX284-C33
6961 BZX284-C33
+8VA
TDA9860 7940
3968 100K
7968 BSH103
6967 BAS216
6969 BAS216
3966 100K
BSH103 7969
3970 100K
7972 BSH103
6970 BAS216
6968 BAS216
BSH103 7971
3978 100K
44-AVC6 L_DELAY
46-AVC6 R_DELAY
43-AVC6 L_BYPASS
45-AVC6 R_BYPASS
19-AVC3 L_AUDIO_YC
18-AVC3 R_AUDIO_YC
4930
4931
2915 470n
2935 470n
2948 470n (RES)
2949 470n (RES)
2950 470n
2951 470n
AUX
SCART
MAIN
INPUT SELECTOR
headphone channel volume
MAD SDA SCL
IIC - BUS CONTROL
VOLUME
STEREO
SPATIAL STEREO
PSEUDO STEREO
FORCED MONO
BASS
TREBLE
BALANCE
REFERENCE VOLTAGE
8V6
3940 4R7
C101
2940 RES
2952 10u
2941 100u
2982 10u
3982 8K2
3981 3K9
3983 3K9
3984 8K2
2984 10u
2942 15n
2943 15n
2944 33n
2945 3n3
+5Vstby
3967 100R
BC857B 7965
3965 100K
GND
R_AUDIO
L_AUDIO
SND_ENABLE
47AVC8
48-AVC8
2-AVC5
96532058_069.EPS 260899

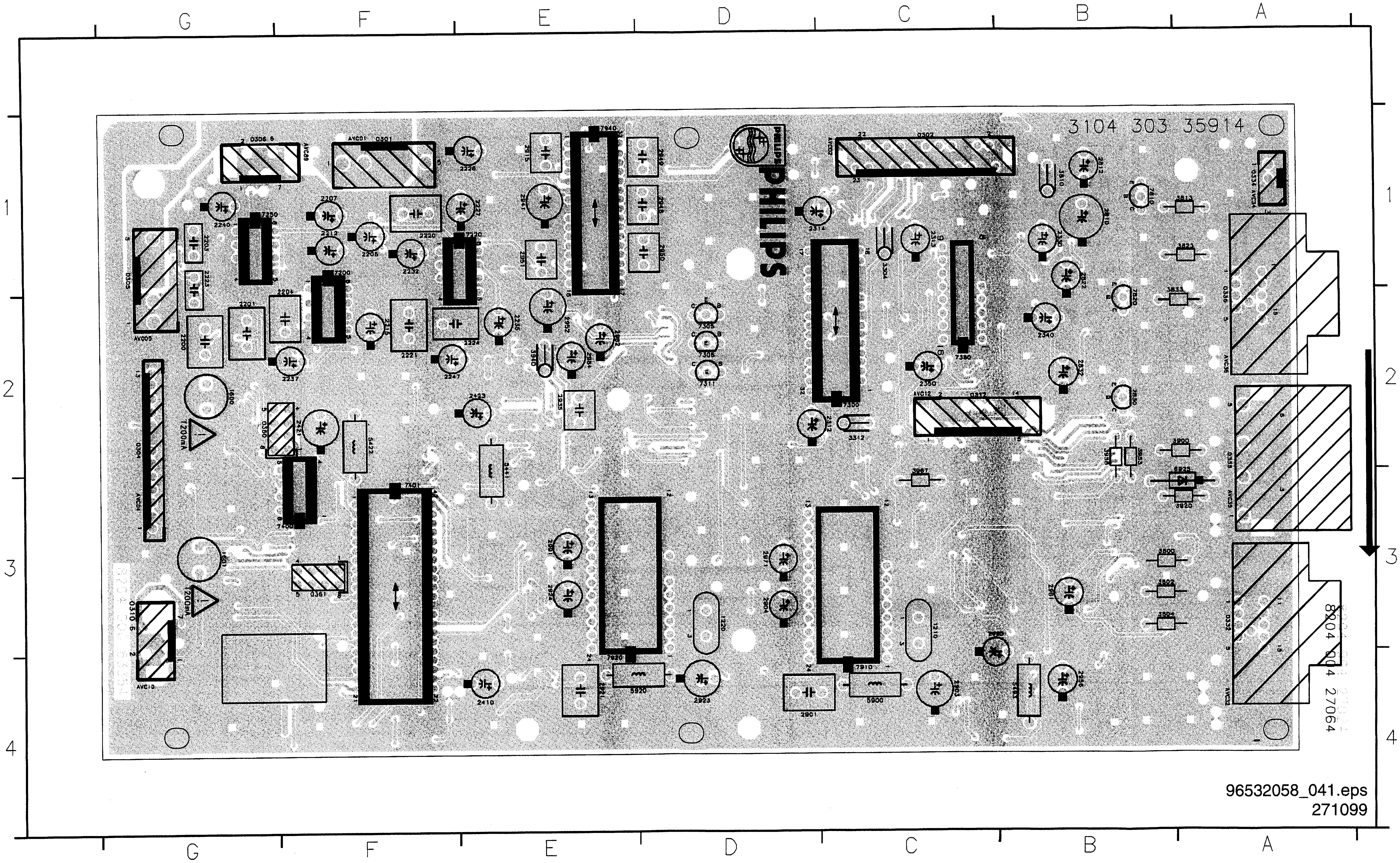
0335-B	A9
2915	C2
2935	C2
2940	E2
2941	E2
2942	E4
2943	E4
2944	E4
2945	E5
2946	B5
2947	B4
2948	C2
2949	D2
2950	D2
2951	D2
2952	E2
2955	A3
2956	A4
2957	A5
2960	B3
2961	B4
2962	B8
2982	F2
2984	F3
3940	D1
3941	B5
3942	B6
3950	A3
3951	A4
3952	A5
3953	A7
3955	B3
3956	B4
3957	B5
3958	B8
3965	B6
3966	C7
3967	B6
3968	B7
3970	D7
3978	E7
3981	E3
3982	F3
3983	E3
3984	F3
4930	C1
4931	C1
6950	A8
6951	A8
6960	B8
6961	C8
6967	B7
6968	D7
6969	C7
6970	D7
7940	B2
7965	C6
7968	C7
7969	C7
7971	D7
7972	D7

AV control


AVC8 AUDIO FILTER + DBE
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H
48-AVC7
L_AUDIO
47-AVC7
R_AUDIO
AVC7
C102
C103
C104
C105
C106
C107
C108
C109
C110
+4VA
+8VA
GND
7250-A LM833N
7250-B LM833N
7200-A LM833N
7200-B LM833N
7220-A LM833N
7220-B LM833N
7202 BC847B
7203 BC847B
7222 BC847B
7223 BC847B
6200 BAS216
6208 BAS216
6220 BAS216
6228 BAS216
3216 100R
3218 100R
2200 680n
2201 680n
2220 680n
2221 680n
2203 10n
2223 10n
3237 3K9
3247 3K9
3236
3246
2236 15p
2246 15p
3238 33K
3248 33K
2238 47p
2248 47p
3239 100R
3249 100R
3200 39K
3220 39K
2202 15p
2222 15p
3213 390R
3233 390R
3212 1K
3232 1K
3201 1K
3221 1K
2231 47p
2241 47p
2207 10u
2227 10u
2212 10u
2232 10u
3211 4K7
3231 4K7
3210 330K
3230 330K
3240 4K7
3241 4K7
2240 100u
3202 1K
3222 1K
2204 100n
2224 100n
2205 15p
2225 15p
3207 1K
3227 1K
3206 1K
3226 1K
2234 47p
2244 47p
2237 10u
2247 10u
3205 100R
3225 100R
3209 100K
3229 100K
2206 2u2
2226 2u2
3242 10K
3244 10K
3208 4K7
3228 4K7
2215 2u2
2235 2u2
AVC89 0306
GND
L_HIGH
L_MID_LOW
GND
R_HIGH
R_MID_LOW
GND
1 2 3 4 5 6 7
TO
A
A89
96532058_070.EPS 260899

0306	D11
2200	C3
2201	C4
2202	C5
2203	B4
2204	C6
2205	C7
2206	D6
2207	C3
2212	D4
2215	D8
2220	F3
2221	F4
2222	F5
2223	E4
2224	G6
2225	F7
2226	H6
2227	G3
2231	C5
2232	G4
2234	D8
2235	H8
2236	B6
2237	D7
2238	B6
2240	D2
2241	G5
2244	G8
2246	E6
2247	G7
2248	F6
3200	B4
3201	C5
3202	C6
3205	C9
3206	C8
3207	C7
3208	D8
3209	D5
3210	D3
3211	D3
3212	C4
3213	C4
3216	C2
3218	F2
3220	F4
3221	G5
3222	F6
3225	F9
3226	G8
3227	G7
3228	H7
3229	H5
3230	H3
3231	G3
3232	G4
3233	F4
3236	A6
3237	B5
3238	B6
3239	B7
3240	D1
3241	D1
3242	D7
3244	H7
3246	E6
3247	E5
3248	E7
3249	E7
6200	D6
6208	D7
6220	H6
6228	H6
7200-A	C5
7200-B	C8
7202	D5
7203	E4
7220-A	F5
7220-B	F8
7222	H5
7223	H4
7250-A	A6
7250-B	E6

AV control (component side)



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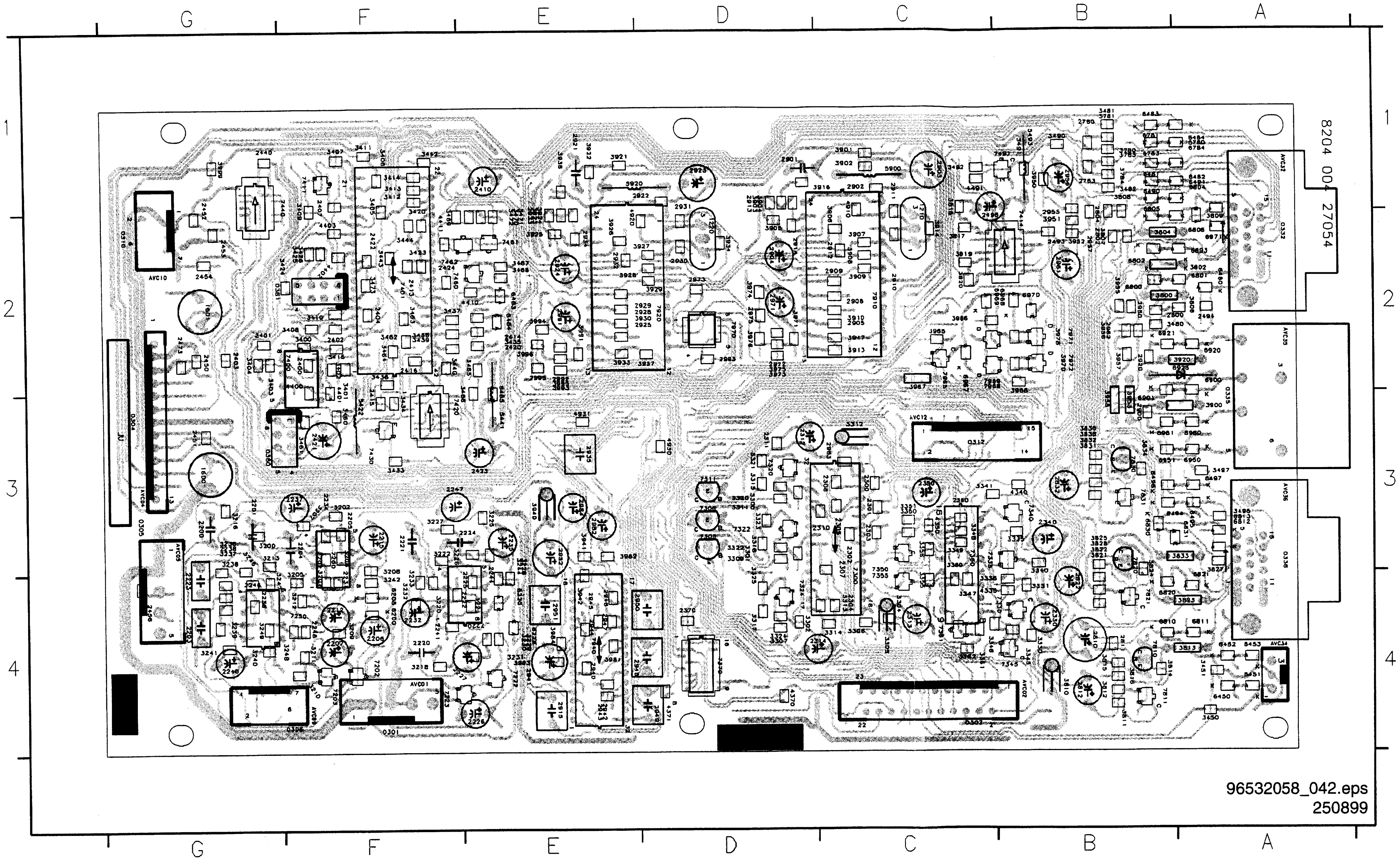
271099

0301	F1
0302	C1
0304	G2
0305	G1
0306	G1
0310	G3
0312	C2
0332	A3
0334	A1
0335	A2
0336	A2
0360	G2
0361	F3
1210	C3
1220	D3
1600	G2
1601	G3
2200	G2
2201	G2
2203	G1
2204	F1
2206	F1
2207	F1
2212	F1
2215	F2
2220	F1
2221	F2
2223	G1
2224	E2
2226	E1
2227	E1
2232	F1
2235	E2
2237	F2
2240	G1
2247	F2
2312	C2
2313	C1
2314	D1
2330	B1
2340	B2
2350	C2
2410	E4
2421	F2
2423	E2
2495	C3
2810	B1
2812	B1
2822	B1
2832	B2
2901	D4
2903	C4
2904	D3
2915	E1
2921	E4
2923	D4
2924	E3
2935	E2
2941	E1
2948	D1
2949	D1
2950	D1
2951	E1
2952	E2
2956	B4
2961	B3
2971	D3
2982	E2
2984	E2
2991	E3
3304	C1
3312	C2
3800	B3
3802	B3
3804	B3
3810	B1
3813	A1
3823	A1
3833	A2
3900	A2
3920	A3
3940	E2
3953	B2
3958	B2
3967	C3
5422	F2
5441	E2
5493	B4
5900	C4
5920	E4
6925	A3
7200	F1
7220	E1
7250	G1
7300	C2
7305	D2
7308	D2
7311	D2
7360	C2
7400	F3
7401	F3
7810	B1
7820	B2
7830	B2
7910	C4
7920	E4
7940	E1

AV control (copper side)



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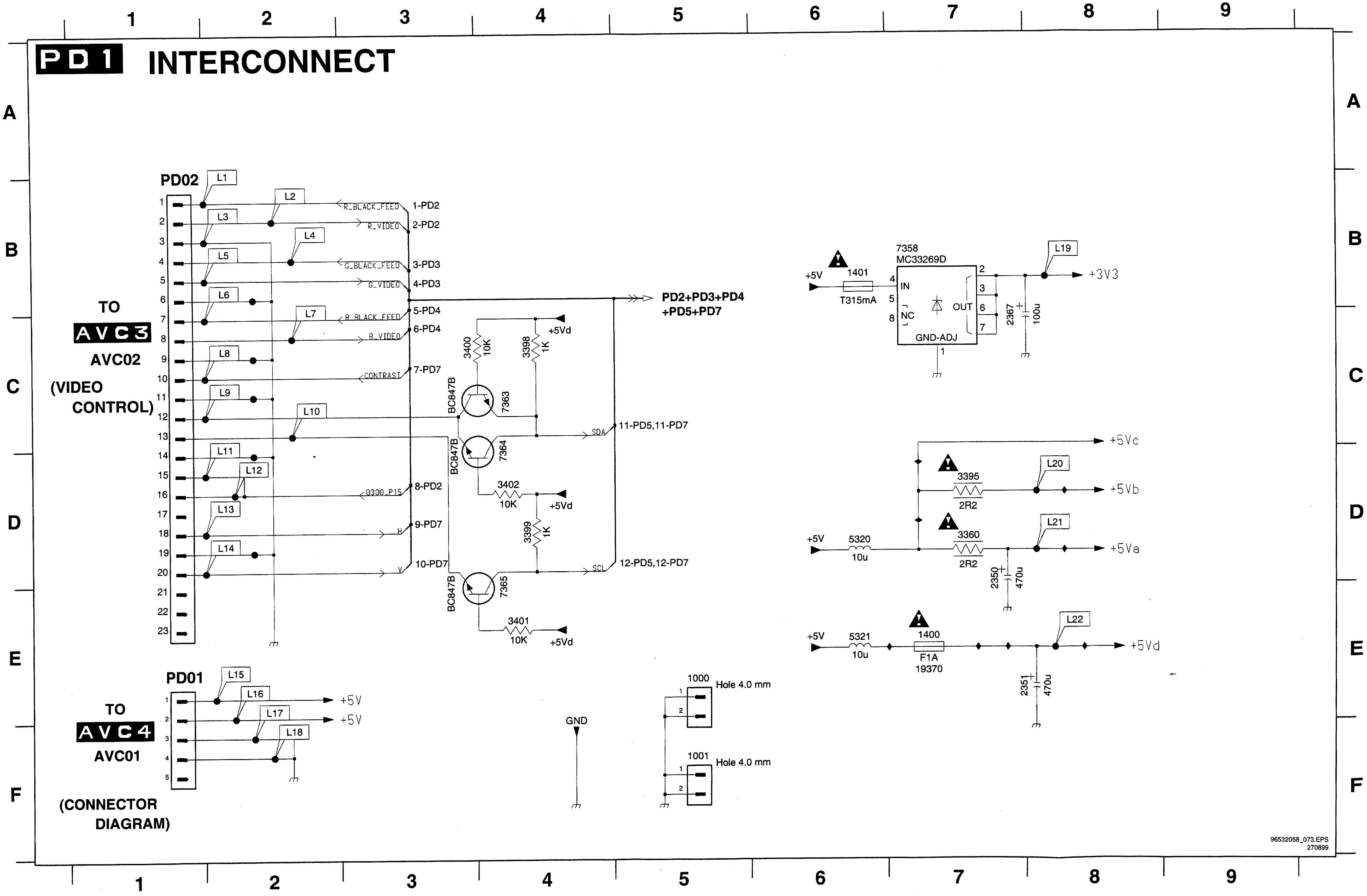
250899

2202	F3	2942	E4	3330	B4	3780	B1	3981	E4	6961	B3
2205	F3	2943	E4	3331	B4	3781	B1	3982	E3	6967	C2
2222	E4	2944	E4	3335	B3	3783	B1	3983	E4	6968	B2
2225	E4	2945	E4	3336	C4	3784	B1	3984	E4	6969	B2
2231	F4	2946	E4	3340	B4	3806	A2	3991	E2	6970	B2
2234	F3	2947	E4	3341	C3	3807	B2	3993	E2	6971	A2
2236	G4	2955	B2	3345	B4	3808	B1	3994	E2	7202	F4
2238	G3	2957	B2	3346	C4	3809	A2	3995	E2	7203	F4
2241	F4	2960	B2	3347	C4	3811	B4	3996	E2	7222	E4
2244	E4	2962	B2	3348	C3	3812	B4	3999	G1	7223	F4
2246	G4	2963	C3	3349	C3	3814	B4	4335	C4	7320	D3
2248	F4	2972	D2	3350	C3	3815	B4	4340	B3	7322	D3
2300	C3	2973	D2	3351	C3	3816	B4	4350	C3	7324	D4
2301	C3	2975	D2	3355	C4	3817	C2	4370	D4	7330	B4
2302	C3	2992	E2	3356	C3	3818	C1	4371	D4	7335	C3
2303	C3	2993	D2	3360	C3	3819	C2	4400	F2	7340	B3
2304	C4	2995	E2	3361	C4	3820	C2	4401	F3	7345	B4
2305	C3	3200	G3	3362	C4	3821	B3	4402	F2	7350	C3
2307	C3	3201	F4	3400	F2	3822	B3	4403	F2	7355	C4
2308	C3	3202	F3	3401	F2	3824	B3	4410	E2	7361	C4
2310	C3	3205	F3	3402	F2	3825	B3	4411	F2	7370	D4
2311	D3	3206	F3	3403	G2	3826	B3	4491	C1	7411	F1
2360	C3	3207	F3	3404	G2	3827	A4	4910	C1	7414	B2
2370	D4	3208	F3	3405	F1	3831	B3	4920	E2	7420	F3
2400	F2	3209	F4	3406	F1	3832	B3	4930	D3	7430	F3
2401	G2	3210	F4	3407	F1	3834	B3	4931	E3	7440	F1
2402	F2	3211	F4	3408	F2	3835	B3	6200	F4	7460	F2
2403	G2	3212	F4	3409	F1	3836	B3	6208	F4	7461	E2
2404	F2	3213	G3	3410	F2	3901	C1	6220	E4	7462	F2
2407	F1	3216	G3	3411	F1	3902	C1	6228	E4	7491	B1
2413	F2	3218	F4	3412	F1	3903	D1	6450	A4	7811	B4
2414	E2	3220	F4	3413	F1	3904	D1	6451	A4	7821	B4
2415	F3	3221	E4	3414	F1	3905	D2	6452	A4	7831	B3
2416	F2	3222	F3	3415	F2	3906	C2	6453	A4	7965	C2
2420	E2	3225	E3	3420	F1	3907	C2	6463	E2	7968	C2
2422	F2	3226	F3	3423	F2	3908	C2	6464	E2	7969	C2
2424	F2	3227	F3	3424	F2	3909	C2	6465	E3	7970	D2
2440	G1	3228	E3	3425	F2	3910	C2	6480	A2	7971	B2
2450	G2	3229	E4	3426	F2	3913	C2	6481	B1	7972	B2
2451	G3	3230	E4	3433	F3	3914	C2	6482	A1		
2452	G1	3231	E4	3434	F3	3916	C1	6483	B1		
2453	G2	3232	F4	3435	E2	3917	C2	6484	A1		
2454	G2	3233	F4	3436	F2	3921	E1	6490	B1		
2456	G4	3236	G3	3437	F2	3922	E1	6491	A1		
2473	G2	3237	G3	3438	F2	3923	E2	6494	B3		
2493	B2	3238	G3	3439	F2	3924	E2	6495	A3		
2494	A2	3239	G4	3440	F2	3925	E2	6496	B3		
2780	B1	3240	G4	3442	F1	3926	E2	6497	A3		
2783	B1	3241	G4	3443	F2	3927	D2	6780	A1		
2800	A2	3242	F4	3444	F2	3928	E2	6781	B1		
2802	B2	3244	E3	3450	A4	3929	D2	6783	B1		
2804	B2	3246	G3	3451	A4	3930	D2	6784	A1		
2811	B4	3247	G4	3460	F3	3933	E2	6800	B2		
2900	B3	3248	F4	3461	F3	3934	D2	6801	A2		
2902	C1	3249	G4	3462	F2	3936	E1	6802	B2		
2905	C2	3300	D3	3463	F2	3937	D2	6803	A2		
2908	C2	3301	D3	3464	F2	3941	E3	6804	A1		
2909	C2	3302	D4	3465	E2	3942	E4	6805	B2		
2910	C2	3305	C4	3466	E3	3950	B1	6806	A2		
2911	C1	3306	C4	3467	E2	3951	B2	6810	B4		
2912	C2	3307	D4	3468	E2	3952	B2	6811	A4		
2913	D1	3309	D3	3469	F2	3955	B2	6812	A3		
2914	D2	3311	D3	3470	E2	3956	B2	6813	A3		
2920	B2	3313	C4	3471	E2	3957	B2	6820	B4		
2922	D1	3314	C4	3472	E2	3965	C2	6821	A4		
2925	D2	3315	D3	3473	F2	3966	C2	6830	B3		
2928	D2	3316	D3	3480	A2	3968	B3	6831	A3		
2929	D2	3317	D4	3481	B1	3970	B2	6900	A2		
2930	D2	3320	D3	3482	B1	3971	D2	6901	B3		
2931	D1	3321	D3	3490	B1	3973	D2	6920	A2		
2932	E2	3322	D3	3491	B1	3974	D2	6921	B2		
2933	E2	3323	D3	3492	C1	3975	D2	6950	A3		
2934	E2	3324	D4	3495	A3	3976	D2	6951	B3		
2940	E4	3325	D4	3497	A3	3978	B2	6960	A3		

PDP limesco

PD1 INTERCONNECT


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
PD02
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
L14
R_BLACK_FEED
R_VIDEO
G_BLACK_FEED
G_VIDEO
B_BLACK_FEED
B_VIDEO
CONTRAST
0300_P15
H
V
SDA
SCL
1-PD2
2-PD2
3-PD3
4-PD3
5-PD4
6-PD4
7-PD7
8-PD2
9-PD7
10-PD7
11-PD5,11-PD7
12-PD5,12-PD7
PD2+PD3+PD4
+PD5+PD7
TO
AVC3
AVC02
(VIDEO
CONTROL)
3400
10K
3398
1K
+5Vd
BC847B
7363
7364
7365
3402
10K
3399
1K
3401
10K
PD01
L15
L16
L17
L18
+5V
+5V
TO
AVC4
AVC01
(CONNECTOR
DIAGRAM)
GND
1000
Hole 4.0 mm
1001
Hole 4.0 mm
+5V
1401
T315mA
7358
MC33269D
IN
NC
OUT
GND-ADJ
2367
100u
L19
+3V3
+5Vc
3395
2R2
L20
+5Vb
5320
10u
3360
2R2
L21
+5Va
2350
470u
5321
10u
1400
F1A
19370
L22
+5Vd
2351
470u
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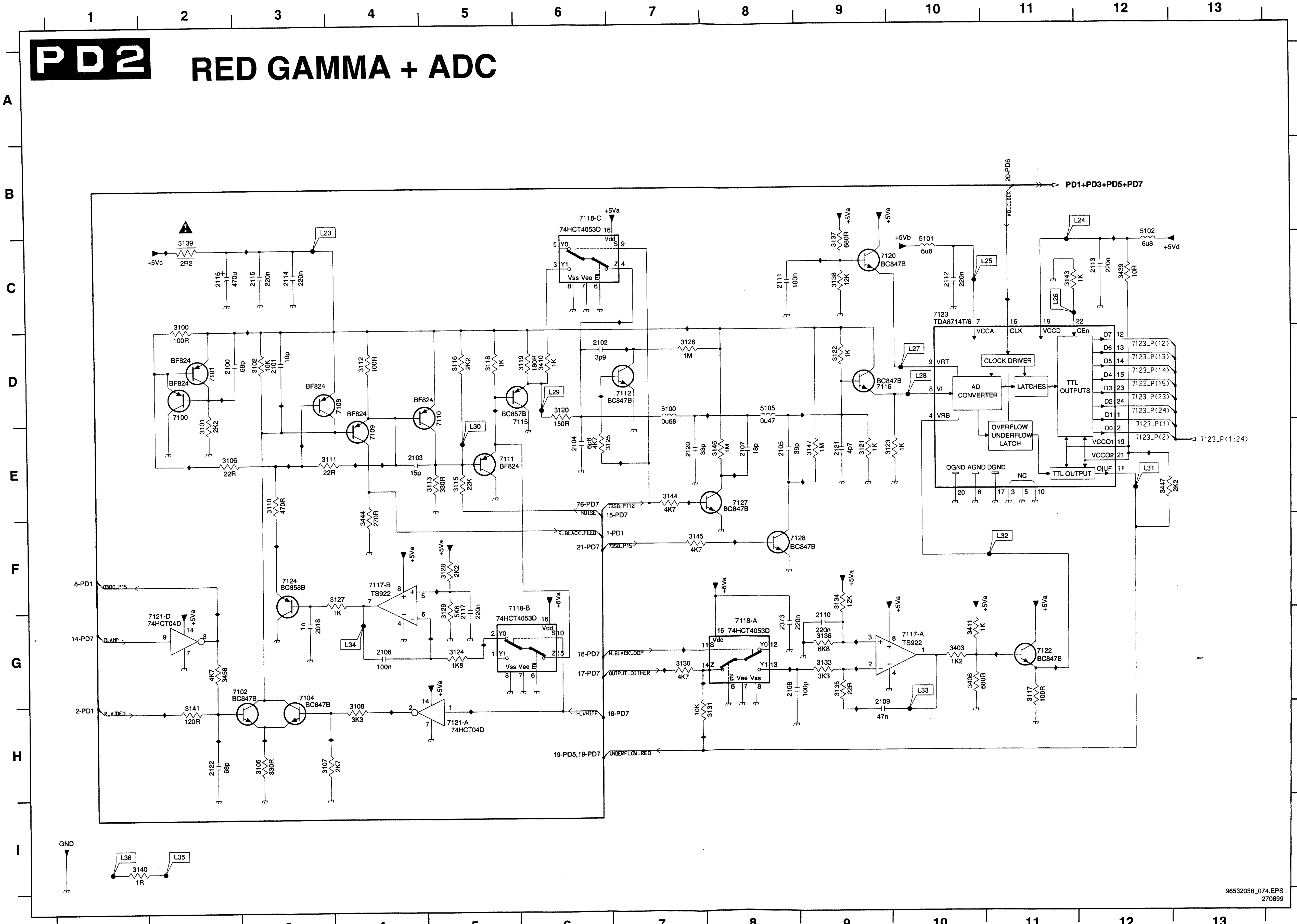
1000	E5
1001	F5
1400	E7
1401	B6
2350	D7
2351	E8
2367	C7
3360	D7
3395	D7
3398	C4
3399	D4
3400	C3
3401	E4
3402	D4
5320	D6
5321	E6
7358	B7
7363	C4
7364	D4
7365	E4

PDP limesco

PD2 RED GAMMA + ADC


1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
PD1+PD3+PD5+PD7
20-PD6
AD_CLOCK
+5Vc
3139 2R2
L23
2116 470u
2115 220n
2114 220n
7118-C 74HCT4053D
+5Va
Vdd
Y0 Y1 Z S E
Vss Vee
3100 100R
BF824
7101
7100
2100 68p
3102 10K
2101 10p
3101 2K2
3106 22R
3111 22R
7108
7109
7110
7111 BF824
3112 100R
3116 2K2
3118 1K
3119 180R
3410 1K
7115 BC857B
L29
L30
3120 150R
2102 3p9
3126 1M
7112 BC847B
2103 15p
3113 330R
3115 22K
2104 6p8
3125 4K7
5100 0u68
5105 0u47
2120 33p
3146 1M
2107 18p
2105 39p
3147 1M
2121 4p7
3121 1K
3123 1K
3122 1K
7116 BC847B
L27
L28
3137 680R
3138 12K
2111 100n
7120 BC847B
+5Vb
5101 6u8
2112 220n
L25
L24
5102 6u8
+5Vd
3143 1K
2113 220n
3439 10R
L26
7123 TDA8714T/6
VCCA CLK VCCD CEn
VRT VI VRB
CLOCK DRIVER
AD CONVERTER
LATCHES
TTL OUTPUTS
OVERFLOW UNDERFLOW LATCH
TTL OUTPUT
OGND AGND DGND
NC
D7 D6 D5 D4 D3 D2 D1 D0
VCCO1 VCCO2 O/UF
7123_P(12) 7123_P(13) 7123_P(14) 7123_P(15) 7123_P(23) 7123_P(24) 7123_P(1) 7123_P(2)
7123_P(1:24)
L31
3447 2K2
L32
3110 470R
3444 270R
76-PD7 NOISE 15-PD7
7350_P112
3144 4K7
7127 BC847B
R_BLACK_FEED 1-PD1
21-PD7 7350_P15
3145 4K7
7128 BC847B
8-PD1 0300_P15
14-PD7 CLAMP
7121-D 74HCT04D
7124 BC858B
3127 1K
2018 1n
7117-B TS922
3128 2K2
3129 5K6
2117 220n
L34
2106 100n
3124 1K8
7118-B 74HCT4053D
16-PD7 H_BLACKLOOP
17-PD7 OUTPUT_DITHER
18-PD7 H_WHITE
19-PD5,19-PD7 UNDERFLOW_RED
2-PD1 R_VIDEO
3141 120R
3458 4K7
7102 BC847B
7104 BC847B
3108 3K3
7121-A 74HCT04D
2122 68p
3105 330R
3107 2K7
3130 4K7
3131 10K
7118-A 74HCT4053D
2373 220n
2110 220n
3136 6K8
3134 12K
3133 3K3
2108 100p
3135 22R
2109 47n
L33
7117-A TS922
3403 1K2
3411 1K
3406 680R
7122 BC847B
3117 100R
GND
L36 3140 1R L35
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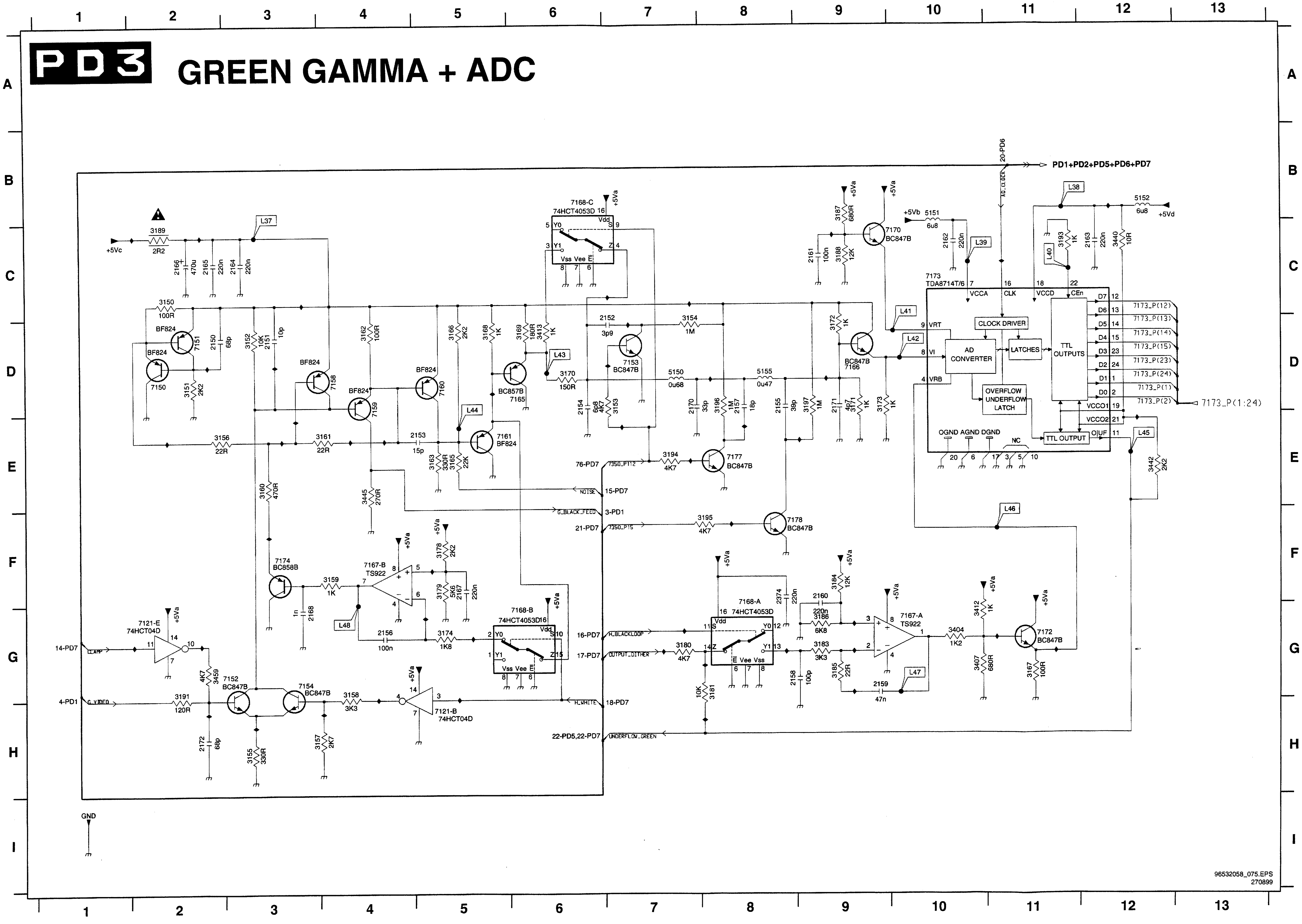
2018	G3
2100	D2
2101	D3
2102	D6
2103	E4
2104	E6
2105	E8
2106	G4
2107	E8
2108	G8
2109	H9
2110	G9
2111	C8
2112	C10
2113	C12
2114	C3
2115	C3
2116	C2
2117	G5
2120	E7
2121	E9
2122	H2
2373	G8
3100	C2
3101	E2
3102	D3
3105	H3
3106	E2
3107	H3
3108	H4
3110	E3
3111	E3
3112	D4
3113	E5
3115	E5
3116	D5
3117	G11
3118	D5
3119	D6
3120	D6
3121	E9
3122	D9
3123	E9
3124	G5
3125	E6
3126	D7
3127	F4
3128	F5
3129	G5
3130	G7
3131	H8
3133	G9
3134	F9
3135	G9
3136	G9
3137	C9
3138	C9
3139	C2
3140	I1
3141	H2
3143	C11
3144	E7
3145	F7
3146	E8
3147	E9
3403	G10
3406	G10
3410	D6
3411	G10
3439	C12
3444	F4
3447	E12
3458	G2
5100	D7
5101	C10
5102	C12
5105	D8
7100	D2
7101	D2
7102	G2
7104	G3
7108	D4
7109	E4
7110	E5
7111	E5
7112	D7
7115	D5
7116	D10
7117-A	G10
7117-B	F4
7118-A	G8
7118-B	F5
7118-C	B6
7120	C9
7121-A	H5
7121-D	G2
7122	G11
7123	C10
7124	F3
7127	E8
7128	F8

PDP limesco

PD3 GREEN GAMMA + ADC


PD3
GREEN GAMMA + ADC
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
+5Vc
3189
2R2
2166 470u
2165 220n
2164 220n
L37
3150 100R
BF824
7151
BF824
7150
2150 68p
3151 2K2
3152 10K
2151 10p
BF824
7158
BF824
7159
BF824
7160
3162 100R
3166 2K2
3168 1K
3169 180R
3413 1K
L43
L44
BC857B
7165
3170 150R
7161 BF824
2153 15p
3156 22R
3161 22R
3160 470R
3445 270R
3163 330R
3165 22K
7168-C
74HCT4053D
Vdd
Y0 Y1 Z
Vss Vee E
+5Va
2152 3p9
3154 1M
7153 BC847B
5150 0u68
5155 0u47
2154 6p8
3153 4K7
2170 33p
3196 1M
2157 18p
2155 39p
3197 1M
2171 4p7
3171 1K
3172 1K
3173 1K
BC847B 7166
3187 680R
7170 BC847B
2161 100n
3188 12K
+5Vb
5151 6u8
2162 220n
L39
L40
3193 1K
2163 220n
3440 10R
L38
5152 6u8
+5Vd
20-PD6
AD_CLOCK
PD1+PD2+PD5+PD6+PD7
L41
L42
7173
TDA8714T/6
VCCA CLK VCCD CEn
VRT VI VRB
CLOCK DRIVER
AD CONVERTER
LATCHES
TTL OUTPUTS
OVERFLOW UNDERFLOW LATCH
TTL OUTPUT
OGND AGND DGND
NC
D7 D6 D5 D4 D3 D2 D1 D0
VCCO1 VCCO2 O/UF
7173_P(12)
7173_P(13)
7173_P(14)
7173_P(15)
7173_P(23)
7173_P(24)
7173_P(1)
7173_P(2)
7173_P(1:24)
L45
3442 2K2
L46
76-PD7
7350_P112
3194 4K7
7177 BC847B
15-PD7
NOISE
3-PD1
G_BLACK_FEED
21-PD7
7350_P15
3195 4K7
7178 BC847B
7174 BC858B
3159 1K
7167-B TS922
3178 2K2
3179 5K6
2167 220n
2168 1n
L48
2156 100n
3174 1K8
7168-B
74HCT4053D
16-PD7
H_BLACKLOOP
17-PD7
OUTPUT_DITHER
18-PD7
H_WHITE
22-PD5,22-PD7
UNDERFLOW_GREEN
14-PD7
CLAMP
7121-E
74HCT04D
3459 4K7
4-PD1
G_VIDEO
3191 120R
7152 BC847B
7154 BC847B
3158 3K3
7121-B
74HCT04D
2172 68p
3155 330R
3157 2K7
7168-A
74HCT4053D
2374 220n
2160 220n
3186 6K8
3184 12K
3180 4K7
3181 10K
3183 3K3
2158 100p
3185 22R
2159 47n
L47
7167-A TS922
3404 1K2
3412 1K
3407 680R
7172 BC847B
3167 100R
GND
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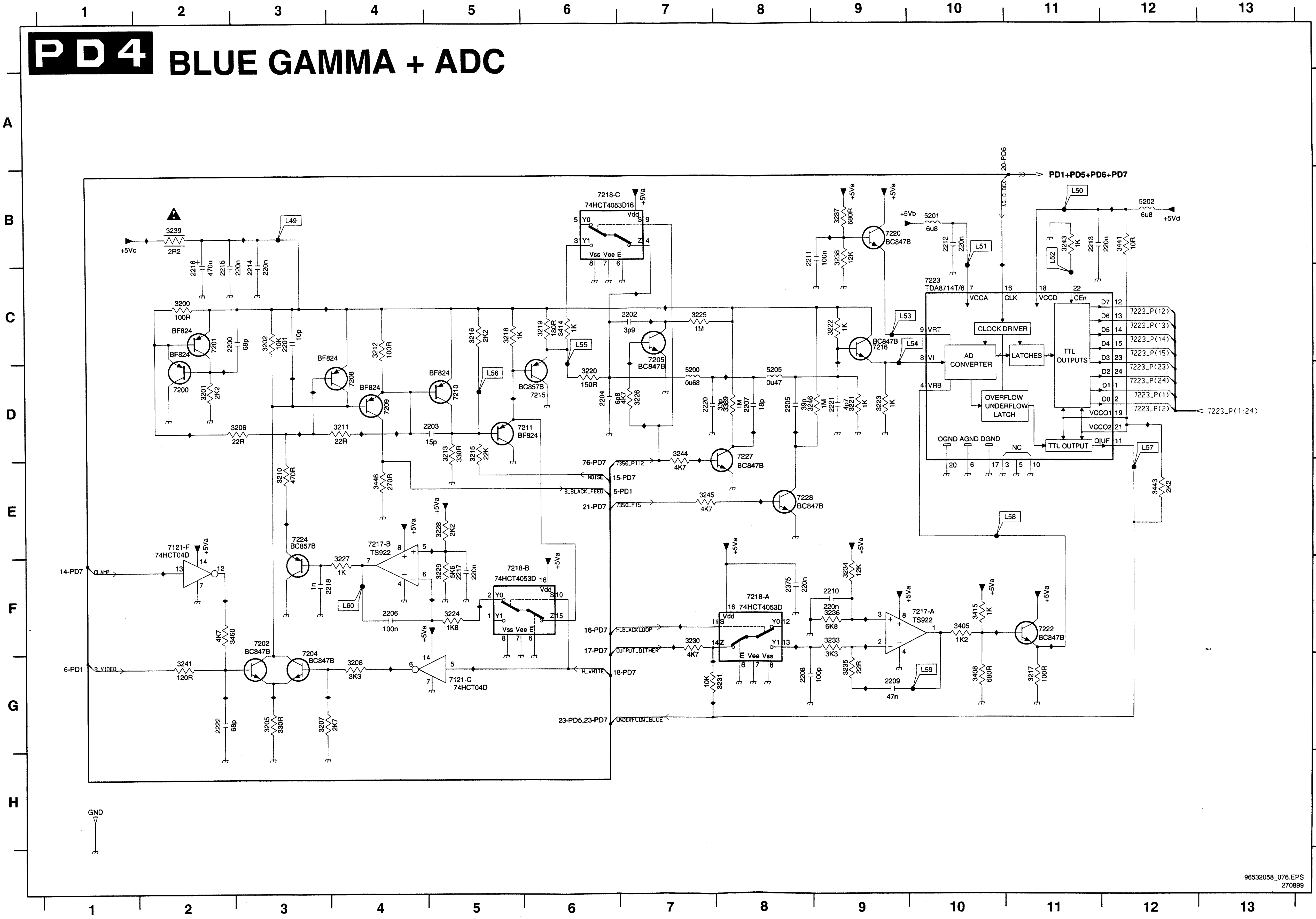
2150	D2
2151	D3
2152	D7
2153	E5
2154	D6
2155	D8
2156	G4
2157	D8
2158	G8
2159	G9
2160	F9
2161	C9
2162	C10
2163	C12
2164	C3
2165	C2
2166	C2
2167	F5
2168	G3
2170	D7
2171	D9
2172	H2
2374	F8
3150	C2
3151	D2
3152	D3
3153	D7
3154	D7
3155	H3
3156	E2
3157	H3
3158	G4
3159	F4
3160	E3
3161	E4
3162	D4
3163	E5
3165	E5
3166	D5
3167	G11
3168	D5
3169	D6
3170	D6
3171	D9
3172	D9
3173	D9
3174	G5
3178	F5
3179	F5
3180	G7
3181	G8
3183	G9
3184	F9
3185	G9
3186	G9
3187	B9
3188	C9
3189	C2
3191	G2
3193	C11
3194	E7
3195	E8
3196	D8
3197	D9
3404	G10
3407	G10
3412	G10
3413	D6
3440	C12
3442	E12
3445	E4
3459	G2
5150	D7
5151	B10
5152	B12
5155	D8
7121-B	H5
7121-E	G2
7150	D2
7151	D2
7152	G2
7153	D7
7154	G3
7158	D4
7159	E4
7160	D5
7161	E5
7165	D5
7166	D9
7167-A	G10
7167-B	F4
7168-A	F8
7168-B	G6
7168-C	B6
7170	C9
7172	G11
7173	C10
7174	F3
7177	E8
7178	E8

PDP limesco

PD4 BLUE GAMMA + ADC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A B C D E F G H
PD1+PD5+PD6+PD7
20-PD6
AD_CLOCK
L49
L50
L51
L52
L53
L54
L55
L56
L57
L58
L59
L60
+5Vc
3239
2R2
2216 470u
2215 220n
2214 220n
3200 100R
BF824 7201
BF824 7200
2200 68p
3201 2K2
3202 10K
2201 10p
3206 22R
BF824 7208
BF824 7209
3212 100R
3211 22R
BF824 7210
2203 15p
3213 330R
3215 22K
3216 2K2
3218 1K
L56
7211 BF824
BC857B 7215
3219 180R
3414 1K
3220 150R
3446 270R
3210 470R
7218-C
74HCT4053D16
+5Va
Vdd
Y0 Y1 Z S E
Vss Vee
2202 3p9
3225 1M
7205 BC847B
2204 6n8
3226 4K7
5200 0u68
5205 0u47
2220 33p
3389 1M
2207 18p
2205 39p
3246 1M
2221 4n7
3221 1K
3223 1K
3222 1K
BC847B 7216
+5Va
3237 680R
3238 12K
2211 100n
7220 BC847B
+5Vb
5201 6u8
2212 220n
5202 6u8
+5Vd
3243 1K
2213 220n
3441 10R
7223
TDA8714T/6
VCCA CLK VCCD CEn
VRT VI VRB
CLOCK DRIVER
AD CONVERTER
LATCHES
TTL OUTPUTS
OVERFLOW UNDERFLOW LATCH
TTL OUTPUT
OGND AGND DGND
NC
D7 D6 D5 D4 D3 D2 D1 D0
VCCO1 VCCO2 O|UF
7223_P(12)
7223_P(13)
7223_P(14)
7223_P(15)
7223_P(23)
7223_P(24)
7223_P(1)
7223_P(2)
7223_P(1:24)
3443 2K2
76-PD7
7350_P112
15-PD7
NOISE
5-PD1
B_BLACK_FEED
21-PD7
7350_P15
3244 4K7
7227 BC847B
3245 4K7
7228 BC847B
7121-F
74HCT04D
14-PD7
CLAMP
7224 BC857B
3227 1K
2218 1n
7217-B TS922
3228 2K2
3229 5K6
2217 220n
7218-B
74HCT4053D
2206 100n
3224 1K8
3460 4K7
6-PD1
B_VIDEO
3241 120R
7202 BC847B
7204 BC847B
3208 3K3
7121-C
74HCT04D
2222 68p
3205 330R
3207 2K7
16-PD7
H_BLACKLOOP
17-PD7
OUTPUT_DITHER
18-PD7
H_WHITE
23-PD5,23-PD7
UNDERFLOW_BLUE
7218-A
74HCT4053D
3230 4K7
3231 10K
2375 220n
2210 220n
3236 6K8
3233 3K3
3235 22R
2208 100p
2209 47n
3234 12K
7217-A TS922
3405 1K2
3415 1K
3408 680R
7222 BC847B
3217 100R
GND
96532058_076.EPS
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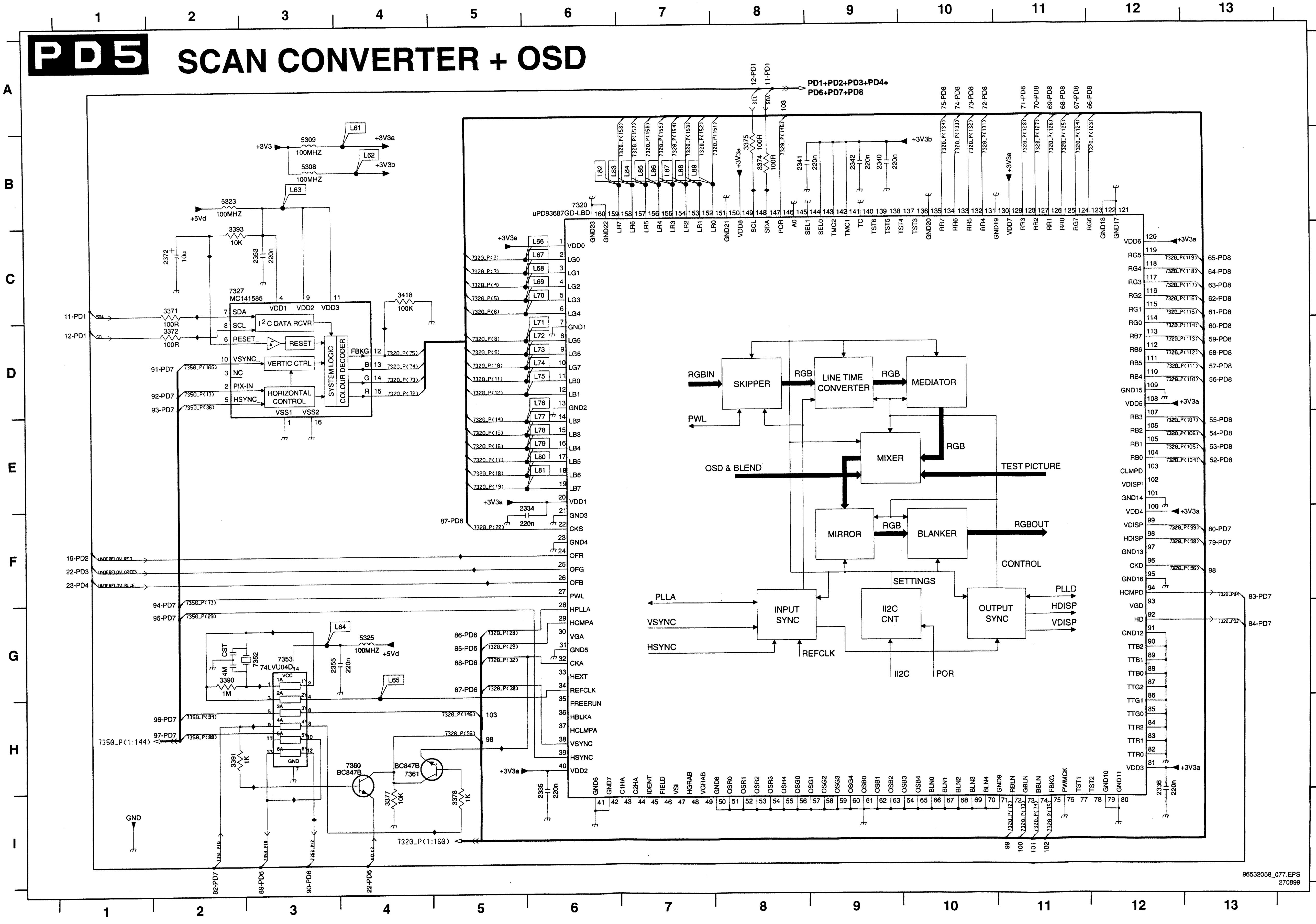
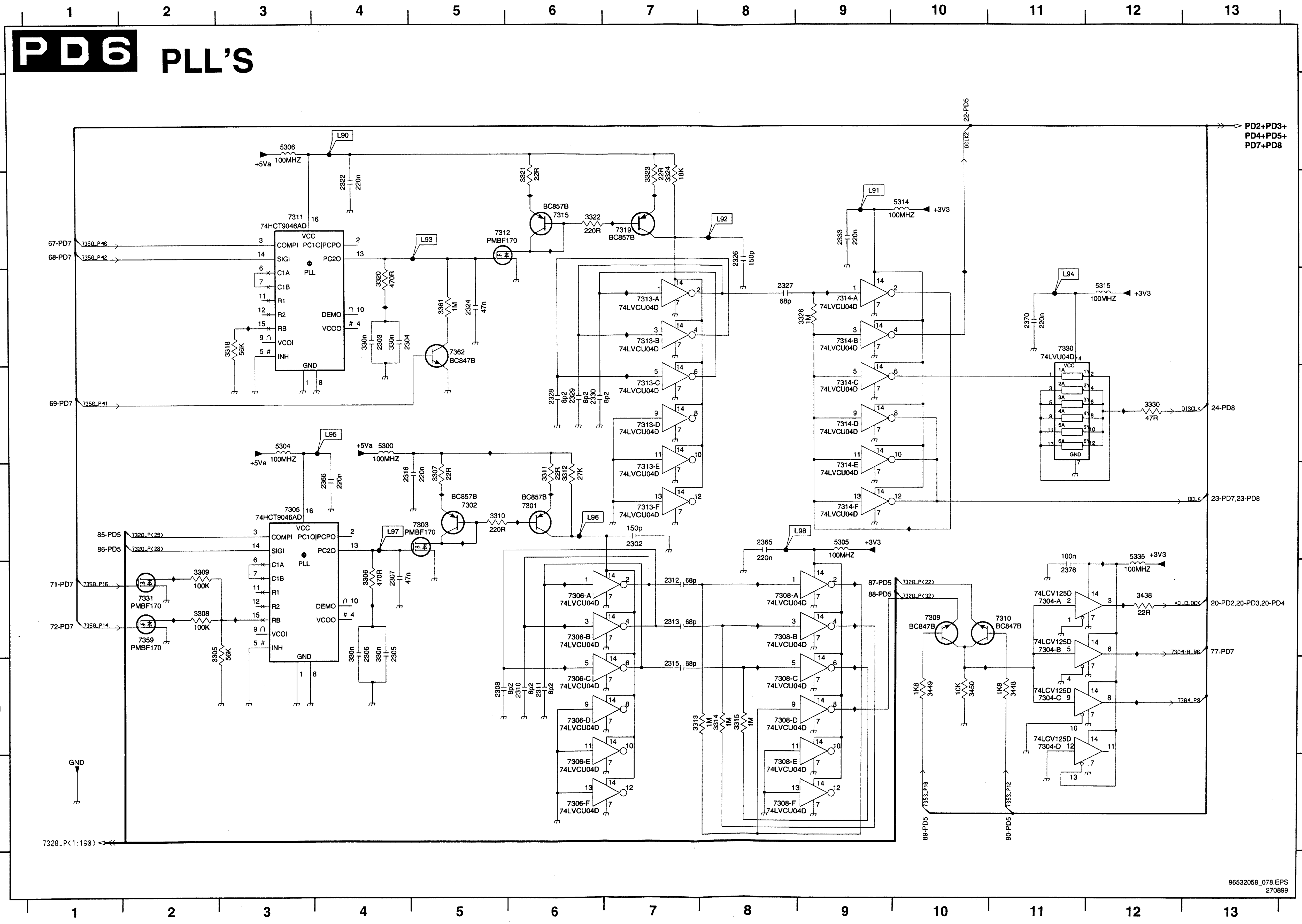
2200	C2
2201	C3
2202	C7
2203	D5
2204	D6
2205	D8
2206	F4
2207	D8
2208	G8
2209	G9
2210	F9
2211	B8
2212	B10
2213	B11
2214	C3
2215	C2
2216	C2
2217	F5
2218	F3
2220	D7
2221	D9
2222	G2
2375	F8
3200	C2
3201	D2
3202	C3
3205	G3
3206	D3
3207	G3
3208	G4
3210	E3
3211	D4
3212	C4
3213	D5
3215	D5
3216	C5
3217	G11
3218	C5
3219	C6
3220	D6
3221	D9
3222	C9
3223	D9
3224	F5
3225	C7
3226	D7
3227	F4
3228	E5
3229	F5
3230	F7
3231	G8
3233	F9
3234	F9
3235	G9
3236	F9
3237	B9
3238	B9
3239	B2
3241	G2
3243	B11
3244	D7
3245	E8
3246	D8
3389	D8
3405	F10
3408	G10
3414	C6
3415	F10
3441	B12
3443	E12
3446	E4
3460	F2
5200	D7
5201	B10
5202	B12
5205	D8
7121-C	G5
7121-F	E2
7200	D2
7201	C2
7202	F3
7204	G3
7205	C7
7208	D4
7209	D4
7210	D5
7211	D5
7215	D6
7216	C9
7217-A	F10
7217-B	E4
7218-A	F8
7218-B	F5
7218-C	B6
7220	B9
7222	F11
7223	C10
7224	E3
7227	D8
7228	E8

PDP limesco


PD5
SCAN CONVERTER + OSD
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
PD1+PD2+PD3+PD4+
PD6+PD7+PD8
12-PD1
11-PD1
+3V3
5309
100MHZ
L61
+3V3a
5308
100MHZ
L62
+3V3b
L63
5323
100MHZ
+5Vd
3393
10K
2372
10u
2353
220n
7327
MC141585
SDA
SCL
RESET_
VSYNC_
NC
PIX-IN
HSYNC_
VDD1 VDD2 VDD3
I2C DATA RCVR
RESET
VERTIC CTRL
HORIZONTAL CONTROL
SYSTEM LOGIC
COLOUR DECODER
FBKG
B
G
R
VSS1 VSS2
3418
100K
3371
100R
3372
100R
11-PD1
12-PD1
91-PD7
92-PD7
93-PD7
7350_P(105)
7350_P(13)
7350_P(36)
7320_P(75)
7320_P(74)
7320_P(73)
7320_P(72)
7320
uPD93687GD-LBD
L66 L67 L68 L69 L70 L71 L72 L73 L74 L75 L76 L77 L78 L79 L80 L81
L82 L83 L84 L85 L86 L87 L88 L89
VDD0
LG0 LG1 LG2 LG3 LG4
GND1
LG5 LG6 LG7
LB0 LB1
GND2
LB2 LB3 LB4 LB5 LB6 LB7
VDD1 GND3 CKS GND4
OFR OFG OFB PWL HPLLA HCMPA VGA GND5 CKA HEXT REFCLK FREERUN HBLKA HCLMPA VSYNC HSYNC VDD2
+3V3a
2334
220n
87-PD6
19-PD2
22-PD3
23-PD4
UNDERFLOW_RED
UNDERFLOW_GREEN
UNDERFLOW_BLUE
94-PD7
95-PD7
7350_P(73)
7350_P(29)
CST
4M
7352
3390
1M
7353
74LVU04D
L64
5325
100MHZ
+5Vd
2355
220n
L65
86-PD6
85-PD6
88-PD6
87-PD6
7320_P(28)
7320_P(29)
7320_P(32)
7320_P(38)
96-PD7
97-PD7
7350_P(94)
7350_P(88)
7350_P(1:144)
7320_P(146)
103
7320_P(96)
98
3391
1K
7360
BC847B
BC847B
7361
3377
10K
3378
1K
2335
220n
GND
7320_P(1:160)
82-PD7
89-PD6
90-PD6
22-PD6
GND23 GND22 LR7 LR6 LR5 LR4 LR3 LR2 LR1 LR0 GND21 VDD8 SCL SDA POR A0 SEL1 SEL0 TMC2 TMC1 TC TST6 TST5 TST4 TST3 GND20 RR7 RR6 RR5 RR4 GND19 VDD7 RR3 RR2 RR1 RR0 RG7 RG6 GND18 GND17
3375
100R
3374
100R
+3V3b
2341
220n
2342
220n
2340
220n
75-PD8 74-PD8 73-PD8 72-PD8 71-PD8 70-PD8 69-PD8 68-PD8 67-PD8 66-PD8
VDD6 RG5 RG4 RG3 RG2 RG1 RG0 RB7 RB6 RB5 RB4 GND15 VDD5 RB3 RB2 RB1 RB0 CLMPD VDISPI GND14 VDD4 VDISP HDISP GND13 CKD GND16 HCMPD VGD HD GND12 TTB2 TTB1 TTB0 TTG2 TTG1 TTG0 TTR2 TTR1 TTR0 VDD3
65-PD8 64-PD8 63-PD8 62-PD8 61-PD8 60-PD8 59-PD8 58-PD8 57-PD8 56-PD8
55-PD8 54-PD8 53-PD8 52-PD8
80-PD7 79-PD7 98
83-PD7 84-PD7
GND6 GND7 C1HA C2HA IDENT FIELD VSI HGRAB VGRAB GND8 OSR0 OSR1 OSR2 OSR3 OSR4 OSG0 OSG1 OSG2 OSG3 OSG4 OSB0 OSB1 OSB2 OSB3 OSB4 BLN0 BLN1 BLN2 BLN3 BLN4 GND9 RBLN GBLN BBLN FBKG PWMCK TST1 TST2 GND10 GND11
99 100 101 102
2336
220n
RGBIN
SKIPPER
RGB
LINE TIME CONVERTER
RGB
MEDIATOR
PWL
MIXER
RGB
OSD & BLEND
TEST PICTURE
MIRROR
RGB
BLANKER
RGBOUT
CONTROL
SETTINGS
PLLA
VSYNC
HSYNC
INPUT SYNC
REFCLK
II2C CNT
II2C
POR
OUTPUT SYNC
PLLD
HDISP
VDISP
96532058_077.EPS
270899

2334	F6
2335	I6
2336	I12
2340	B9
2341	B8
2342	B9
2353	C3
2355	G3
2372	C2
3371	C2
3372	D2
3374	B8
3375	B8
3377	I4
3378	I5
3390	G2
3391	H2
3393	C2
3418	C4
5308	B3
5309	B3
5323	B2
5325	G4
7320	B6
7327	C2
7352	G3
7353	G3
7360	H4
7361	H4

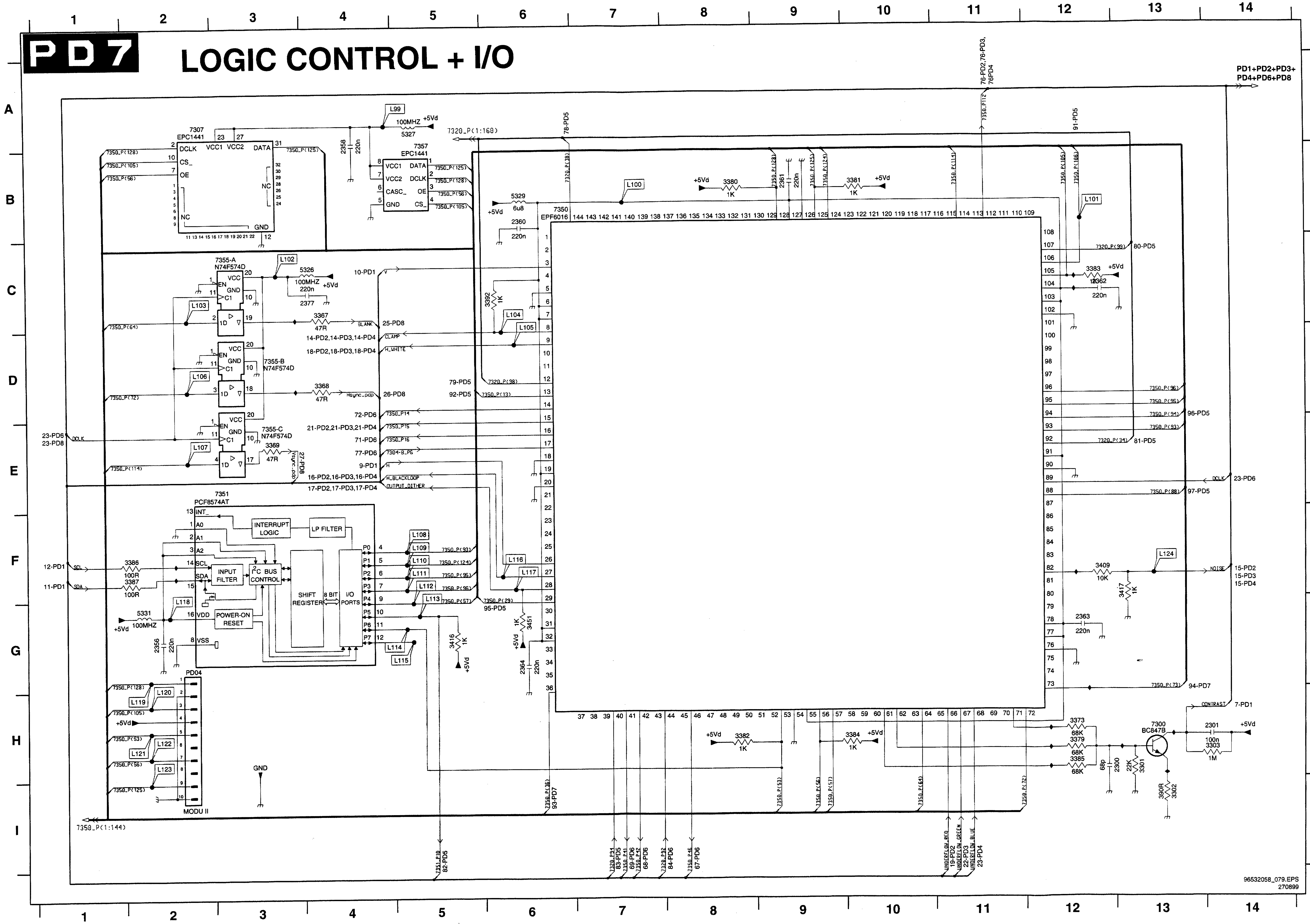
PDP limesco


PD6 PLL'S
1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H
+5Va
5306 100MHZ
L90
2322 220n
7311 74HCT9046AD
VCC
COMPI
SIGI
C1A
C1B
R1
R2
RB
VCOI
INH
PC1O|PCPO
PC2O
PLL
DEMO
VCOO
GND
67-PD7
68-PD7
69-PD7
3318 56K
L93
3320 470R
2303 330n
2304 330n
3361 1M
2324 47n
7362 BC847B
7312 PMBF170
3321 22R
BC857B 7315
3322 220R
7319 BC857B
3323 22R
3324 18K
L92
2326 150p
7313-A 74LVCU04D
7313-B 74LVCU04D
7313-C 74LVCU04D
7313-D 74LVCU04D
7313-E 74LVCU04D
7313-F 74LVCU04D
2328 8p2
2329 8p2
2330 8p2
2327 68p
3326 1M
L91
5314 100MHZ
+3V3
2333 220n
7314-A 74LVCU04D
7314-B 74LVCU04D
7314-C 74LVCU04D
7314-D 74LVCU04D
7314-E 74LVCU04D
7314-F 74LVCU04D
22-PD5
PD2+PD3+ PD4+PD5+ PD7+PD8
L94
5315 100MHZ
2370 220n
7330 74LVU04D
3330 47R
DISCLK
24-PD8
CCLK
23-PD7,23-PD8
L95
5304 100MHZ
2366 220n
+5Va 5300 100MHZ
2316 220n
3307 22R
BC857B 7302
3310 220R
BC857B 7301
3311 22R
3312 27K
L96
150p 2302
7305 74HCT9046AD
85-PD5
86-PD5
71-PD7
72-PD7
7331 PMBF170
7359 PMBF170
3309 100K
3308 100K
3305 56K
L97
7303 PMBF170
3306 470R
2307 47n
2305 330n
2306 330n
7306-A 74LVCU04D
7306-B 74LVCU04D
7306-C 74LVCU04D
7306-D 74LVCU04D
7306-E 74LVCU04D
7306-F 74LVCU04D
2308 8p2
2310 8p2
2311 8p2
2312 68p
2313 68p
2315 68p
3313 1M
3314 1M
3315 1M
2365 220n
L98
5305 100MHZ
7308-A 74LVCU04D
7308-B 74LVCU04D
7308-C 74LVCU04D
7308-D 74LVCU04D
7308-E 74LVCU04D
7308-F 74LVCU04D
87-PD5
88-PD5
7309 BC847B
7310 BC847B
3449 1K8
3450 10K
3448 1K8
89-PD5
90-PD5
100n 2376
5335 100MHZ
74LCV125D 7304-A
74LCV125D 7304-B
74LCV125D 7304-C
74LCV125D 7304-D
3438 22R
AD_CLOCK
20-PD2,20-PD3,20-PD4
77-PD7
GND
7320_P(1:160)
96532058_078.EPS
270899

2302	E7
2303	C4
2304	C4
2305	F4
2306	F4
2307	F4
2308	G5
2310	G6
2311	G6
2312	F7
2313	F7
2315	G7
2316	E4
2322	B4
2324	C5
2326	B8
2327	C8
2328	D6
2329	D6
2330	D6
2333	B9
2365	E8
2366	E4
2370	C11
2376	F11
3305	F2
3306	F4
3307	E5
3308	F2
3309	F2
3310	E5
3311	E6
3312	E6
3313	G7
3314	G8
3315	G8
3318	C3
3320	C4
3321	B6
3322	B6
3323	B7
3324	B7
3326	C9
3330	D12
3361	C5
3438	F12
3448	G11
3449	G10
3450	G10
4000	G11
5300	D4
5304	D3
5305	E9
5306	A3
5314	B10
5315	C12
5335	E12
7301	E6
7302	E5
7303	E5
7304-A	F11
7304-B	F11
7304-C	G11
7304-D	G11
7305	E3
7306-A	F6
7306-B	F6
7306-C	G6
7306-D	G6
7306-E	H6
7306-F	H6
7308-A	F8
7308-B	F8
7308-C	G8
7308-D	G8
7308-E	H8
7308-F	H8
7309	F10
7310	F11
7311	B3
7312	B5
7313-A	C7
7313-B	C7
7313-C	D7
7313-D	D7
7313-E	E7
7313-F	E7
7314-A	C9
7314-B	C9
7314-C	D9
7314-D	D9
7314-E	E9
7314-F	E9
7315	B6
7319	B7
7330	C11
7331	F2
7359	F2
7362	C5

PDP limesco

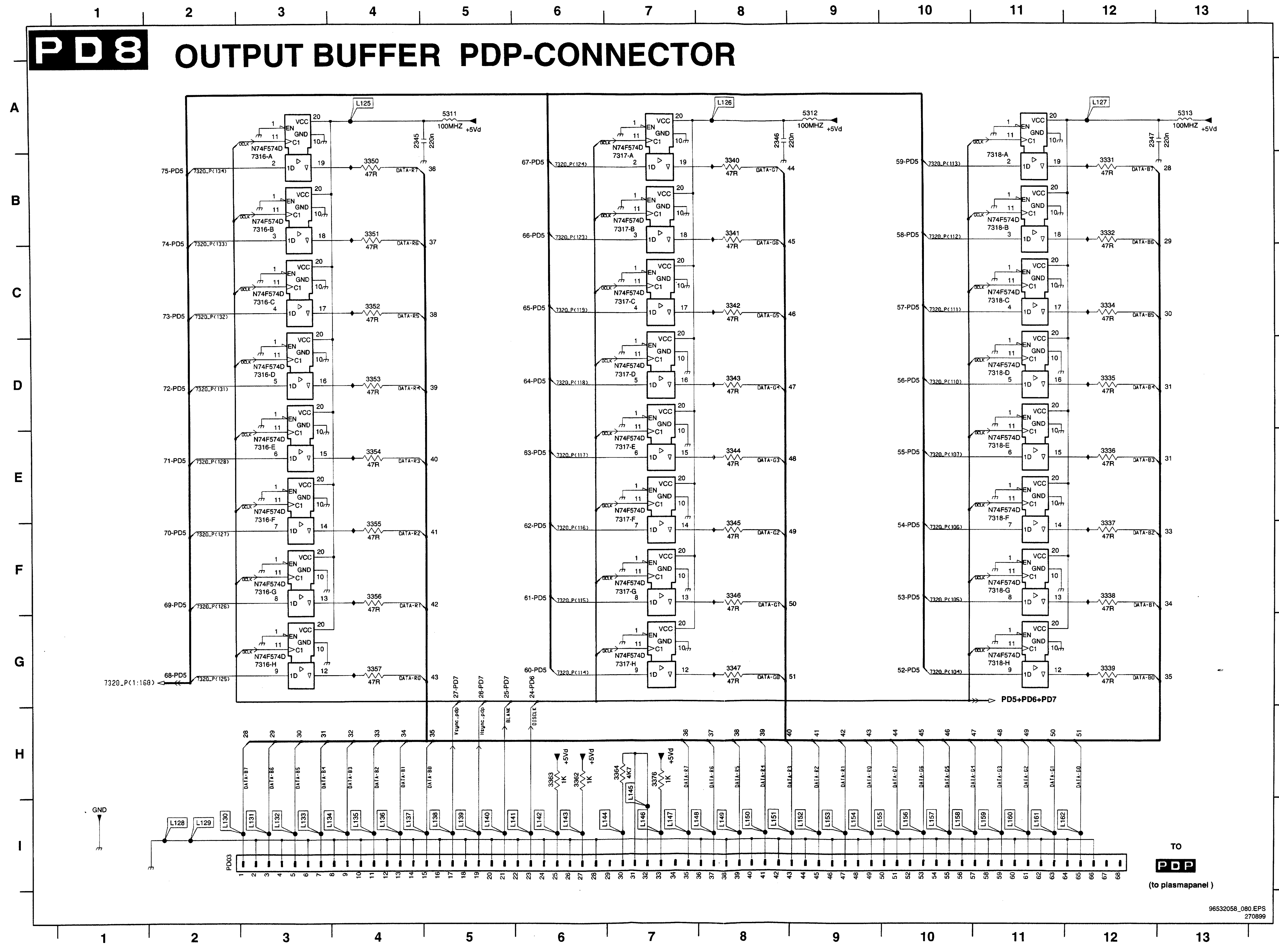
PD7 LOGIC CONTROL + I/O


PD7
LOGIC CONTROL + I/O
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I
7307
EPC1441
DCLK
CS_
OE
NC
GND
VCC1 VCC2
DATA
7357
EPC1441
VCC1
VCC2
CASC_
GND
DCLK
OE
CS_
L99
100MHZ
5327
+5Vd
2358
220n
7320_P(1:160)
78-PD5
76-PD2,76-PD3,
76PD4
91-PD5
PD1+PD2+PD3+
PD4+PD6+PD8
L100
L101
+5Vd
3380
1K
2361
220n
3381
1K
5329
6u8
2360
220n
7350
EPF6016
7355-A
N74F574D
7355-B
N74F574D
7355-C
N74F574D
L102
5326
100MHZ
220n
2377
L103
L106
L107
3367
47R
3368
47R
3369
47R
10-PD1
BLANK
25-PD8
14-PD2,14-PD3,14-PD4
CLAMP
18-PD2,18-PD3,18-PD4
H_WHITE
Hsync_pdp
26-PD8
27-PD8
79-PD5
92-PD5
72-PD6
21-PD2,21-PD3,21-PD4
71-PD6
77-PD6
9-PD1
16-PD2,16-PD3,16-PD4
H_BLACKLOOP
17-PD2,17-PD3,17-PD4
OUTPUT_DITHER
23-PD6
23-PD8
DCLK
3392
1K
L104
L105
7351
PCF8574AT
INT_
A0
A1
A2
SCL
SDA
VDD
VSS
INTERRUPT
LOGIC
LP FILTER
INPUT
FILTER
I²C BUS
CONTROL
SHIFT
REGISTER
8 BIT
I/O
PORTS
POWER-ON
RESET
P0 P1 P2 P3 P4 P5 P6 P7
L108 L109 L110 L111 L112 L113 L114 L115
L116 L117 L118
12-PD1
SCL
11-PD1
SDA
3386
100R
3387
100R
5331
100MHZ
+5Vd
2356
220n
95-PD5
3416
1K
3451
1K
2364
220n
PD04
L119 L120 L121 L122 L123
MODU II
GND
7350_P(1:144)
93-PD7
82-PD5
83-PD5
69-PD6
68-PD6
84-PD6
67-PD6
19-PD2
22-PD3
23-PD4
UNDERFLOW_RED
UNDERFLOW_GREEN
UNDERFLOW_BLUE
80-PD5
3383
+5Vd
2362
220n
96-PD5
81-PD5
DCLK
23-PD6
97-PD5
L124
3409
10K
3417
1K
NOISE
15-PD2
15-PD3
15-PD4
2363
220n
94-PD7
CONTRAST
7-PD1
3373
68K
3379
68K
3385
68K
7300
BC847B
2301
100n
3303
1M
+5Vd
68p
2300
22K
3301
390R
3302
+5Vd
3382
1K
3384
1K
96532058_079.EPS
270899

2300	H12
2301	H14
2356	G2
2358	A4
2360	B6
2361	B9
2362	C12
2363	G12
2364	G6
2377	C4
3301	H13
3302	I13
3303	H14
3367	C4
3368	D4
3369	E4
3373	H12
3379	H12
3380	B8
3381	B10
3382	H8
3383	C12
3384	H10
3385	H12
3386	F2
3387	F2
3392	C6
3409	F12
3416	G5
3417	F13
3451	G6
5326	C4
5327	A5
5329	B6
5331	G2
7300	H13
7307	A2
7350	B6
7351	E2
7355-A	C3
7355-B	D3
7355-C	E3
7357	A5

PDP limesco

PD8 OUTPUT BUFFER PDP-CONNECTOR



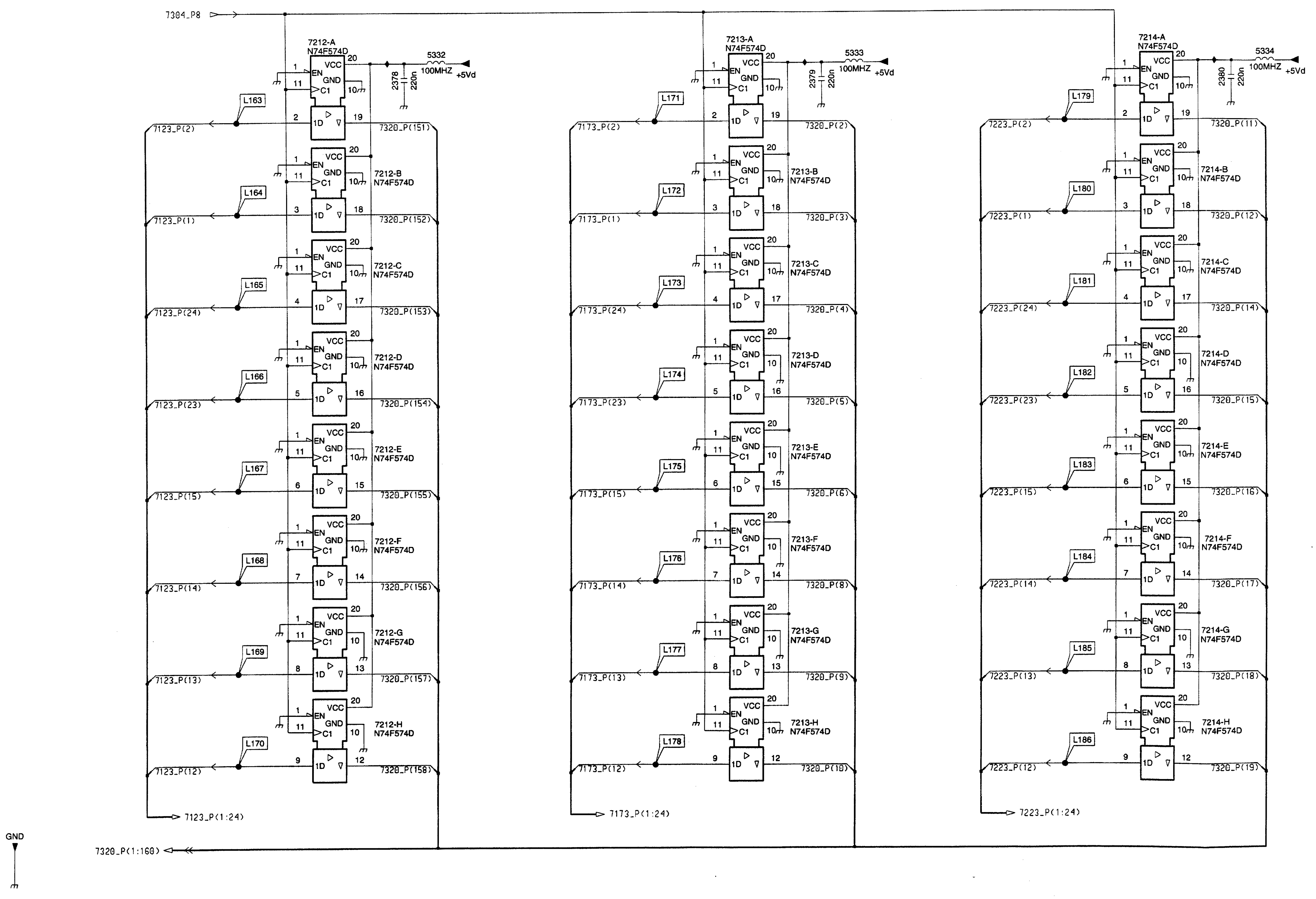
L125
L126
L127
5311 100MHZ +5Vd
5312 100MHZ +5Vd
5313 100MHZ +5Vd
2345 220n
2346 220n
2347 220n
VCC
EN
GND
C1
1D
N74F574D
7316-A
7316-B
7316-C
7316-D
7316-E
7316-F
7316-G
7316-H
7317-A
7317-B
7317-C
7317-D
7317-E
7317-F
7317-G
7317-H
7318-A
7318-B
7318-C
7318-D
7318-E
7318-F
7318-G
7318-H
DCLK
75-PD5
74-PD5
73-PD5
72-PD5
71-PD5
70-PD5
69-PD5
68-PD5
67-PD5
66-PD5
65-PD5
64-PD5
63-PD5
62-PD5
61-PD5
60-PD5
59-PD5
58-PD5
57-PD5
56-PD5
55-PD5
54-PD5
53-PD5
52-PD5
7320_P(1:160)
3350 47R
3351 47R
3352 47R
3353 47R
3354 47R
3355 47R
3356 47R
3357 47R
3340 47R
3341 47R
3342 47R
3343 47R
3344 47R
3345 47R
3346 47R
3347 47R
3331 47R
3332 47R
3334 47R
3335 47R
3336 47R
3337 47R
3338 47R
3339 47R
DATA-R7
DATA-R6
DATA-R5
DATA-R4
DATA-R3
DATA-R2
DATA-R1
DATA-R0
DATA-G7
DATA-G6
DATA-G5
DATA-G4
DATA-G3
DATA-G2
DATA-G1
DATA-G0
DATA-B7
DATA-B6
DATA-B5
DATA-B4
DATA-B3
DATA-B2
DATA-B1
DATA-B0
27-PD7
26-PD7
25-PD7
24-PD6
Vsync_pdp
Hsync_pdp
BLANK
DISCLK
PD5+PD6+PD7
+5Vd
3363 1K
3362 1K
3364 4K7
3376 1K
GND
L128
L129
L130
L131
L132
L133
L134
L135
L136
L137
L138
L139
L140
L141
L142
L143
L144
L145
L146
L147
L148
L149
L150
L151
L152
L153
L154
L155
L156
L157
L158
L159
L160
L161
L162
PD03
TO
PDP
(to plasmapanel)

96532058_080.EPS
270899

2345	B5
2346	B8
2347	B13
3331	B12
3332	C12
3334	C12
3335	D12
3336	E12
3337	F12
3338	G12
3339	G12
3340	B8
3341	C8
3342	C8
3343	D8
3344	E8
3345	F8
3346	G8
3347	G8
3350	B4
3351	C4
3352	C4
3353	D4
3354	E4
3355	F4
3356	G4
3357	G4
3362	I6
3363	I6
3364	I7
3376	I7
5311	A5
5312	A9
5313	A13
7316-A	B3
7316-B	C3
7316-C	C3
7316-D	D3
7316-E	E3
7316-F	F3
7316-G	G3
7316-H	G3
7317-A	B7
7317-B	C7
7317-C	C7
7317-D	D7
7317-E	E7
7317-F	F7
7317-G	G7
7317-H	G7
7318-A	B11
7318-B	C11
7318-C	C11
7318-D	D11
7318-E	E11
7318-F	F11
7318-G	G11
7318-H	G11

PDP limesco

PD9 BUFFER 2



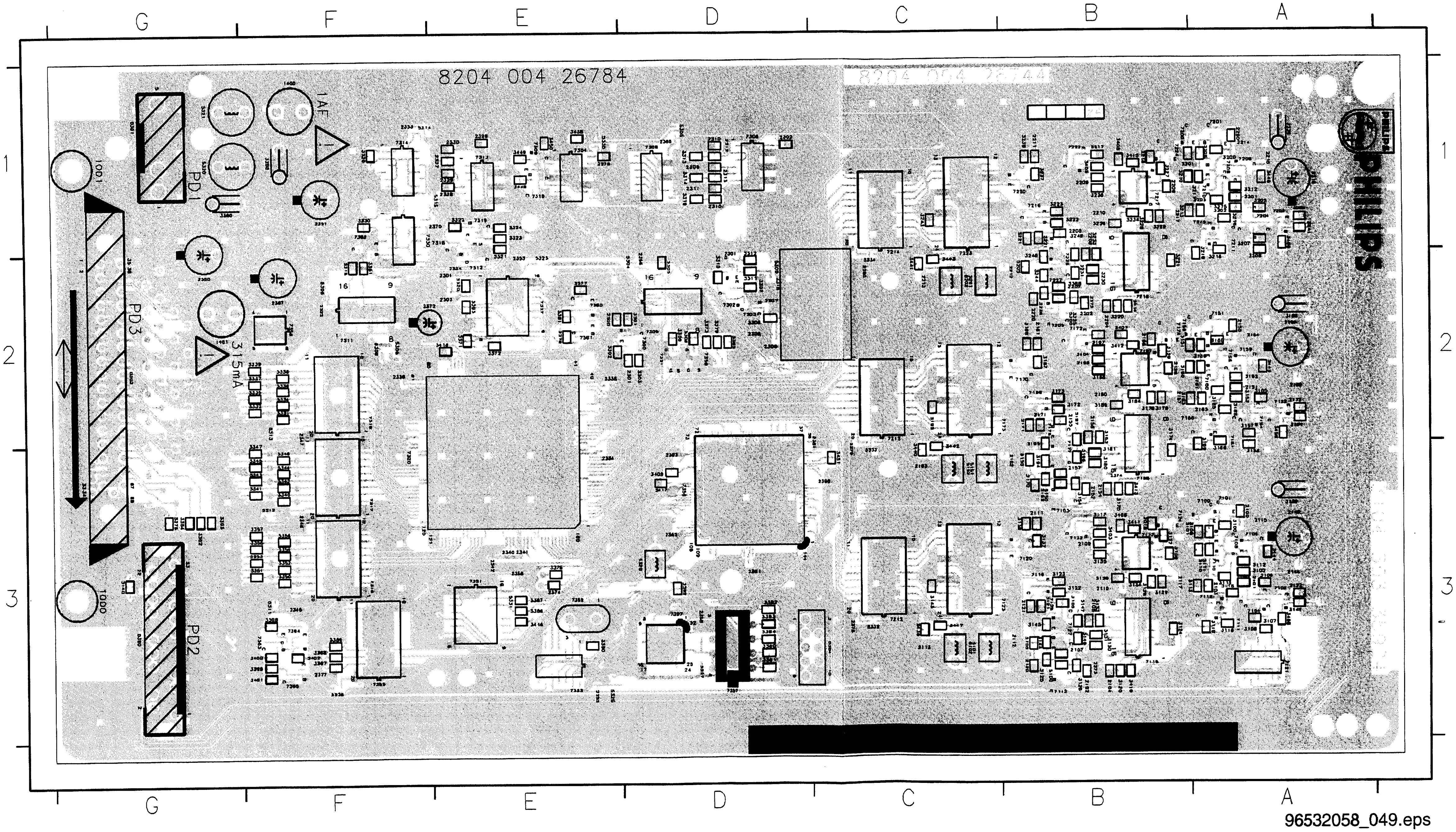
7304_P8
7212-A
N74F574D
7213-A
N74F574D
7214-A
N74F574D
VCC
GND
EN
C1
1D
5332
5333
5334
100MHZ
+5Vd
2378
2379
2380
220n
L163
L164
L165
L166
L167
L168
L169
L170
L171
L172
L173
L174
L175
L176
L177
L178
L179
L180
L181
L182
L183
L184
L185
L186
7212-B N74F574D
7212-C N74F574D
7212-D N74F574D
7212-E N74F574D
7212-F N74F574D
7212-G N74F574D
7212-H N74F574D
7213-B N74F574D
7213-C N74F574D
7213-D N74F574D
7213-E N74F574D
7213-F N74F574D
7213-G N74F574D
7213-H N74F574D
7214-B N74F574D
7214-C N74F574D
7214-D N74F574D
7214-E N74F574D
7214-F N74F574D
7214-G N74F574D
7214-H N74F574D
7123_P(2)
7123_P(1)
7123_P(24)
7123_P(23)
7123_P(15)
7123_P(14)
7123_P(13)
7123_P(12)
7123_P(1:24)
7173_P(2)
7173_P(1)
7173_P(24)
7173_P(23)
7173_P(15)
7173_P(14)
7173_P(13)
7173_P(12)
7173_P(1:24)
7223_P(2)
7223_P(1)
7223_P(24)
7223_P(23)
7223_P(15)
7223_P(14)
7223_P(13)
7223_P(12)
7223_P(1:24)
7320_P(151)
7320_P(152)
7320_P(153)
7320_P(154)
7320_P(155)
7320_P(156)
7320_P(157)
7320_P(158)
7320_P(2)
7320_P(3)
7320_P(4)
7320_P(5)
7320_P(6)
7320_P(8)
7320_P(9)
7320_P(10)
7320_P(11)
7320_P(12)
7320_P(14)
7320_P(15)
7320_P(16)
7320_P(17)
7320_P(18)
7320_P(19)
7320_P(1:160)
GND

CL96532058_090.eps
280999

2378	B4
2379	B8
2380	B11
5332	B5
5333	B8
5334	B12
7212-A	B4
7212-B	C4
7212-C	D4
7212-D	E4
7212-E	E4
7212-F	F4
7212-G	G4
7212-H	H4
7213-A	B7
7213-B	C8
7213-C	D8
7213-D	E8
7213-E	E8
7213-F	F8
7213-G	G8
7213-H	H8
7214-A	B11
7214-B	C11
7214-C	D11
7214-D	E11
7214-E	E11
7214-F	F11
7214-G	G11
7214-H	H11

PDP limesco (component side)

0300	G3
0301	G1
0302	G2
0304	C3
1400	F1
1401	G2
2018	B3
2100	A3
2101	A3
2102	B3
2103	A3
2104	B3
2105	B3
2106	B3
2107	B3
2108	B3
2109	B3
2110	B3
2111	B3
2112	B3
2113	C3
2114	A3
2115	A3
2116	A3
2117	B3
2120	B3
2121	B3
2122	A3
2150	A2
2151	A2
2152	B3
2153	A2
2154	B3
2155	B2
2156	B2
2157	B3
2158	B2
2159	B2
2160	B2
2161	B2
2162	B3
2163	C3
2164	A2
2165	A2
2166	A2
2167	B2
2168	B2
2170	B3
2171	B2
2172	A2
2200	A1
2201	A1
2202	B2
2203	A1
2204	B2
2205	B1
2206	B1
2207	B2
2208	B1
2209	B1
2210	B1
2211	B1
2212	B2
2213	C2
2214	A1
2215	A1
2216	A1
2217	B1
2218	B1
2220	B2
2221	B1
2222	A1
2300	E2
2301	D2
2302	D1
2303	E2
2304	E2
2305	D2
2306	D2
2307	D2
2308	D1
2310	D1
2311	D1
2312	D1
2313	D1
2315	D1
2316	D2
2322	F2
2324	E2
2326	E1
2327	E1
2328	E1
2329	E1
2330	E1
2333	F1
2334	E3
2335	E2
2336	F2
2340	E3
2341	E3
2342	E3
2345	F3
2346	F3
2347	F2
2350	G2
2351	F1
2353	E2
2355	E3
2356	E3
2358	D3
2360	C3
2361	D3
2362	D3
2363	D3
2364	C3
2365	D1
2366	D2
2367	F2
2370	E1
2372	F2
2373	B3
2374	B3
2375	B2
2376	E1
2377	F3
2378	C3
2379	C3
2380	C2
3100	A3
3101	B3
3102	A3
3105	A3
3106	B3
3107	A3
3108	A3
3110	A3
3111	A3
3112	A3
3113	B3
3115	A3
3116	A3
3117	B3
3118	A3
3119	A3
3120	B3
3121	B3
3122	B3
3123	B3
3124	B3
3125	B3
3126	B3
3127	B3
3128	B3
3129	B3
3130	B3
3131	B3
3133	B3
3134	B3
3135	B3
3136	B3
3137	B3
3138	B3
3139	A3
3140	G3
3141	A3
3143	C3
3144	B3
3145	B3
3146	B3
3147	B3
3150	A2
3151	B2
3152	A2
3153	B3
3154	B3
3155	A2
3156	A2
3157	A2
3158	A3
3159	B2
3160	B2
3161	A2
3162	A2
3163	B2
3165	A2
3166	A2
3167	B2
3168	A3
3169	A3
3170	B3
3171	B2
3172	B2
3173	B2
3174	B2
3178	B2
3179	B2
3180	B3
3181	B3
3183	B2
3184	B2
3185	B2
3186	B2
3187	B2
3188	B2
3189	A2
3191	A2
3193	C2
3194	B3
3195	B3
3196	B3
3197	B2
3200	A1
3201	B1
3202	A1
3205	A1
3206	A1
3207	A1
3208	A2
3210	B1
3211	A1
3212	A1
3213	B1
3215	A1
3216	A1
3217	B1
3218	A2
3219	A2
3220	B2
3221	B1
3222	B1
3223	B1
3224	B2
3225	B2
3226	B2
3227	B1
3228	B1
3229	B1
3230	B2
3231	B2
3233	B1
3234	B1
3235	B1
3236	B1
3237	B1
3238	B1
3239	A1
3241	A1
3243	C1
3244	B2
3245	B2
3246	B1
3301	D2
3302	E2
3303	D2
3305	D2
3306	D2
3307	D2
3308	D2
3309	D2
3310	D2
3311	D2
3312	D2
3313	D1
3314	D1
3315	D1
3318	F2
3320	E2
3321	E2
3322	E1
3323	E1
3324	E1
3326	F1
3330	F1
3331	F2
3332	F2
3334	F2
3335	F2
3336	F2
3337	F2
3338	F2
3339	F2
3340	F3
3341	F3
3342	F3
3343	F3
3344	F3
3345	F3
3346	F3
3347	F2
3350	F3
3351	F3
3352	F3
3353	F3
3354	F3
3355	F3
3356	F3
3357	F3
3360	G1
3361	F2
3362	G3
3363	G3
3364	G3
3367	F3
3368	F3
3369	F3
3371	E2
3372	E2
3373	D2
3374	E3
3375	E3
3376	G3
3377	E2
3378	E2
3379	D2
3380	D3
3381	D3
3382	D3
3383	D3
3384	D3
3385	D2
3386	E3
3387	E3
3389	B2
3390	E3
3391	E2
3392	D3
3393	E2
3395	F1
3398	F3
3399	F3
3400	F3
3401	F3
3402	F3
3403	B3
3404	B2
3405	B1
3406	B3
3407	B2
3408	B1
3409	D3
3410	B3
3411	B3
3412	B2
3413	B3
3414	B2
3415	B1
3416	E3
3417	D3
3418	E2
3438	E1
3439	C3
3440	C3
3441	C2
3442	C3
3443	C2
3444	A3
3445	A2
3446	A1
3447	C3
3448	E1
3449	E1
3450	E1
3451	C3
3458	A3
3459	A2
3460	A1
5100	B3
5101	C3
5102	C3
5105	B3
5150	B3
5151	C3
5152	C3
5155	B3
5200	B2
5201	C2
5202	C2
5205	B2
5300	D2
5304	D2
5305	D1
5306	F2
5308	F2
5309	F2
5311	F3
5312	F3
5313	F2
5314	F1
5315	E1
5320	G1
5321	G1
5323	E2
5325	E3
5326	F3
5327	D3
5329	D3
5331	E3
5332	C3
5333	C3
5334	C2
5335	E1
7100	A3
7101	A3
7102	A3
7104	A3
7108	A3
7109	A3
7110	A3
7111	A3
7112	B3
7115	A3
7116	B3
7117	B3
7118	B3
7120	B3
7121	A3
7122	B3
7123	B3
7124	B3
7127	B3
7128	B3
7150	B2
7151	A2
7152	A2
7153	B3
7154	A2
7158	A2
7159	A2
7160	A2
7161	A3
7165	B2
7166	B2
7167	B2
7168	B3
7170	B2
7172	B2
7173	B2
7174	B2
7177	B3
7178	B2
7200	B1
7201	A1
7202	A1
7204	A1
7205	B2
7208	A1
7209	A1
7210	A1
7211	A1
7212	C3
7213	C2
7214	C2
7215	A1
7216	B1
7217	B1
7218	B2
7220	B1
7222	B1
7223	C2
7224	B1
7227	B2
7228	B2
7300	D2
7301	D2
7302	D2
7303	D2
7304	E1
7305	D2
7306	D1
7307	D3
7308	D1
7309	E1
7310	E1
7311	F2
7312	E2
7313	E1
7314	F1
7315	E1
7316	F3
7317	F3
7318	F2
7319	E1
7320	F3
7327	E2
7330	F1
7331	D2
7350	D3
7351	E3
7352	E3
7353	E3
7355	F3
7357	D3
7358	F2
7359	D2
7360	E2
7361	E2
7362	F1
7363	F3
7364	F3
7365	F3



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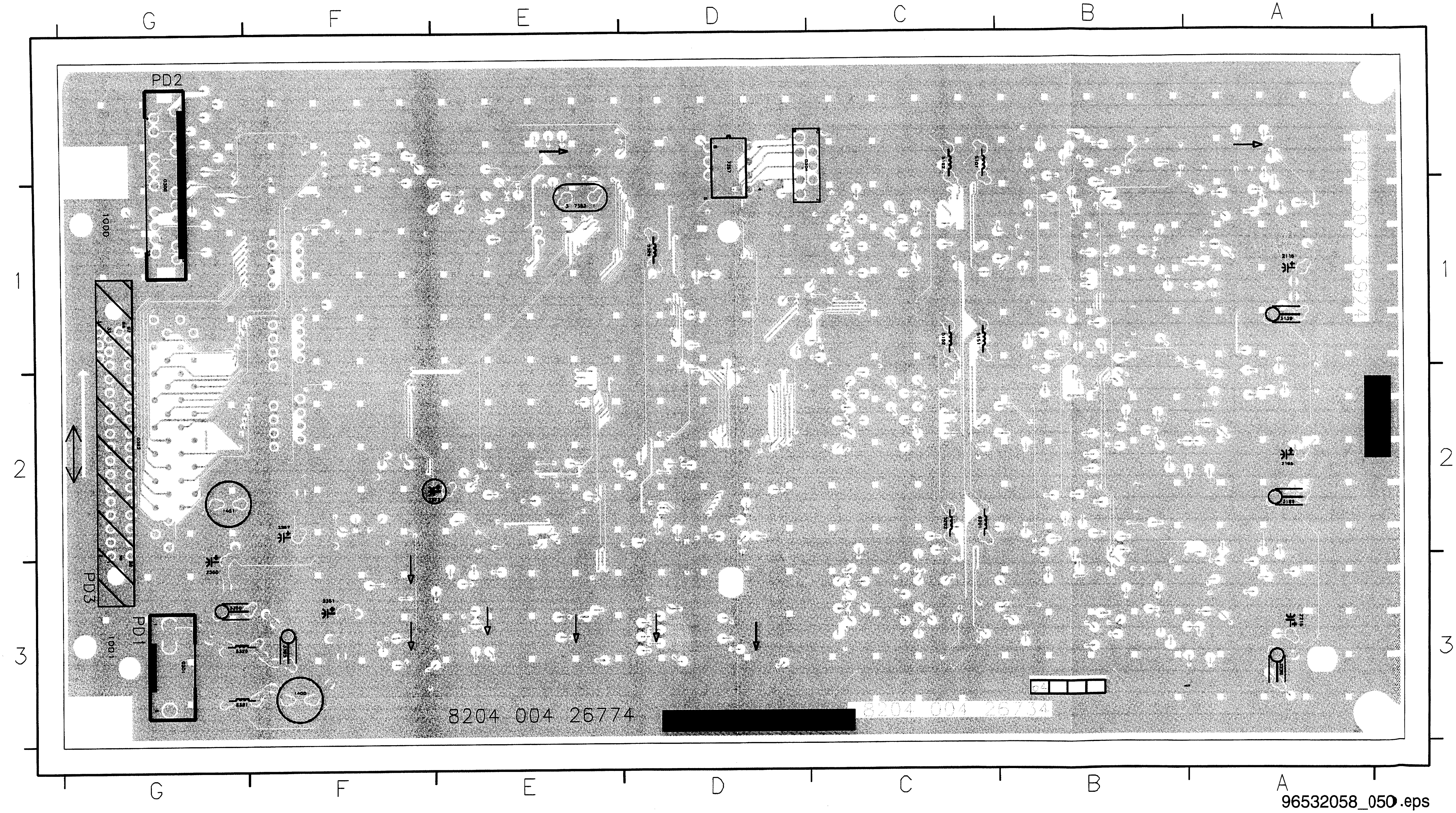
271099

PDP limesco (copper side)


G
F
E
D
C
B
A
1
2
3
PD2
PD3
PD1
1000
1001
1400
1401
3104 303 35924
8204 004 26774
8204 004 26734

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250899

8. Alignments

General: the Service Default Mode (SDM) and Service Alignment Mode (SAM) are described in chapter 5 'Service modes, faultfinding and repair tips'.

8.1 Alignment conditions

All electrical adjustments should be performed under the following conditions:

- Supply voltage : 220 - 240 VAC (+/- 10 %)
- Warm-up time: 10 minutes
- The voltages and oscillograms are measured in relation to the tuner earth.
- Test probe: Ri > 10MΩ Ci < 2,5 pF.

8.1.1 Selection of the SAM-menu

- By transmitting the "ALIGN" command with the RC7150 Dealer Service Tool, followed by password "3140" and < OK > button.
- Standard RC sequence 062596 (within OSD time-out) OSD
- By shorting test-point M28 and M29 on the AV Control panel on the monitor while switching on the set.

8.2 Adjustments on the D-box

8.2.1 Electrical Alignments

Pre-conditioner +5Vstby (PR3)
Connect a voltmeter to capacitor C2510 (PR2). With the aid of R3504 adjust the voltage to 5.2 V +/- 50 mV.

VsVa supply (FD)

Va-supply (Addressing of the PDP - FD1)
De-activated the PDP.
Connect a voltmeter to capacitor C2120 (FD1). With the aid of R3126 adjust the voltage to 55 V +/- 0.5 V.

Vs-supply (Sustain pulses - FD2)
De-activated the PDP.
Connect a voltmeter to capacitor C2020 (FD2). With the aid of R3026 adjust the voltage to 165 V +/- 0.5 V.

8.2.2 Software Alignments

White point

- Select the item "PDP test pattern" of the Service Alignment menu and set it to "ON.
- Select item " White point" of the Service Alignment menu.
- Enter the "white point" menu and adjust the value of one of the 4 submenu if necessary. Only the selected menu-item including its value remain on the screen when selected. The value has to changed within 5 seconds otherwise the main menu reappears again.

The 4 sub menu-items of the White point menu:

- "RED"
- "GREEN"
- "BLUE"
- "COLOUR TEMPERATURE"

- Leave the sub-menu by pressing "cursor up", "cursor down", "OK" or the "MenuOnOff" button and return to the main menu.
- Select the item "PDP test pattern" of the Service Alignment menu and set it to "OFF.

9. Circuit description and list of abbreviations

9.1 Circuit description

For a detailed description of the circuits see Training Manual FTV1.9 Display Box (3122 785 10036).

9.2 List of abbreviations

µP	Micro Processor
1FH	One time the line frequency for normal picture quality
2FH	Twice the line frequency for a better picture with less field flicker
2CS	2 Carrier Sound (sound system using two separate FM carriers at 5.5 MHz)
AARA	Automatic Aspect Ratio Adaptation
ADC	Analogue Digital Converter
ADJ	Adjust -
AFC	(S1) Automatic Frequency Control. Automatic fine-tuning circuit for signal reception.
AGC	Automatic Gain Control
AM	Amplitude Modulation
AMV	Automatic Multi Voltage
ANT	Antenna
AP	Asian Pacific region (Covering Hong Kong, Australia, Singapore etc.)
APC	Automatic Power Control
ASP	Aspect Ratio 4:3 or 14:9 or 16:9
AUD	Audio - GFL
AVB	Audio Video Buffer or Audio Video Blanking
BC	Beam current - GFL
BNC	Professional connector for higher frequencies
C	Centre
CINCH	Common connector for several kinds of signals
COMP	COMB-filter
CRT	Cathode Ray Tube
CVBS	Composite Video Blanking Synchronisation, video signal
DAC	Digital Analogue Converter
DEC	Decoder
DFB	Double Window Fast Blanking
DU	Double Window - U_signal
DV	Double Window - V_signal
DW	Double Window
DY	Double Window - Y_signal
E-Box	Electronic Box
EHT	Extra High Tension - GFL
ELPS	Eco Low Power Supply - GFL
EWD	East West Drive - GFL
EXT	External
FBL	Fast Blinking
FBX	Feature Box
FE	FrontEnd
FM	Frequency Modulation
FMS	Functional Module Specification
FRNT	Front
FRS	Functional Requirement Specification
FTV	Flat TeleVision
GFL	Global Feature Line (high end TV chassis)
GFL-FL	GFL Feature (up)Lift
GND	Ground
HFB	Horizontal FlyBack (display system sync. pulse)
HP	Headphone
HSI	Hardware Software Interface
HW	HardWare
I/O	Input / Output
I2C	IC bus, Inter Integrated circuit, on-board communication line
IF	Intermediate Frequency
IRQ	Interrupt ReQuest.
L	Left
L_CL VL	Left_Constant_Level Variable_Level
L_REC SEL	Left_Record_Select
LED	Light Emitting Diode
LP	Low Pass
LTP	Luminance Transient Processor
MAC	(Apple) MACintosh
MAC13	or MACII (Apple) MACintosh format for 13" monitors
MACP	Motion Adaptive Colour Plus
ML-2	Media Line 2
Monitor	PDP Display with all the electronic boards (incl. self developed boards).
MU	Main U_signal
MV	Main V_signal
MY	Main Y_signal
NICAM	Near Instantaneous Companding Audio Multiplex (digital terrestrial sound
NTSC	National TV Standard Committee
OE	(AQ) Output Enable
PAL	Phase Alternating Lines (Colour video standard)
PDP	Plasma Display Panel
PIP	Picture In Picture
PLL	Phase Locked Loop
POR	Power On Reset / Power Off Reset (depending on context)
QPSK	Quadruple Phase Shift Keying
R	Right
RAM	Random Access Memory
RC5	Remote Control 5 (infrared signal transmission protocol)
RECEI-RC5	Received RC5-code
REF	Reference
RES	Resistor
RGB	Red Green Blue, video signals
SC-1FH	Sandcastle 1FH
SCL	Serial Clock Line of the IC bus
SDA	Serial Data Line of the IC bus
SECAM	SEquential Couleur A Memoire (Colour video standard)
SIF	Second Intermediate frequency
SND	Sound
SOG	Sync On Green
SP_GAIN	Splitter GAIN
SPHsync	Splitter Horizontal Sync
SPVsync	Splitter Vertical Sync
SSP	Small Signal Panel (of the GFL chassis)
STBY	Standby
SW	SoftWare / SubWoofer (depending on context)
SYNC	Synchronisation
SYS	System
Terr	Terrestrial
TP	Testpoint
TRASN	(AQ)
TSD	Terrestrial Sound Decoder (combination of 2CS and NICAM decoder)
TUN	Tuner

TXT	TeleteXT
TXT-KILL	Teletext killer (Signal to disable Teletext)
U-VIDCONTR	U-VideoContrast
VCO	Voltage Controlled Oscillator
VD	Vertical Drive
VGA	Video Graphics Array. In this document, the term VGA is used for all VGA
WE	Write Enable
Xtal	Crystal (Oscillator)
Y/C	Luminance (Y) signal / Chrominance signal (C)
YUV	Combination of colour difference signals

10. Spare parts list

Various

3122 126 30181	SERVICE CUSHION
3122 357 20541	COLOURED FRAME - PURPLE
3122 357 20551	COLOURED FRAME - BLUE
3122 357 20561	COLOURED FRAME - GREEN
3122 357 20571	COLOURED FRAME - CHAMPAGNE
3122 358 75921	VGA CABLE - 2M
3122 358 75932	VGA CABLE - 5M
3122 358 76021	VGA CABLE - 10M

Audio Amplifier [A]

Various

0034	3122 121 24785	SPRING FOR BRACKET
0036	3122 121 24785	SPRING FOR BRACKET
0313	4822 265 41462	CON 7P
0320	2422 025 12482	CON 6P
0340	4822 267 10565	CON 4P
0341	4822 267 10565	CON 4P
1101▲	4822 252 51121	Fuse (3,15A)
1102▲	4822 252 51121	Fuse (3,15A)

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2500	4822 124 40248	10μF 20% 63V
2501	4822 122 32614	1.2nF 10% 50V
2502	4822 124 40248	10μF 20% 63V
2503	4822 122 32614	1.2nF 10% 50V
2505	4822 122 32614	1.2nF 10% 50V
2506	4822 124 40248	10μF 20% 63V
2507	4822 122 32614	1.2nF 10% 50V
2508	4822 124 40248	10μF 20% 63V
2543	4822 122 33837	1nF 10% 50V
2544	4822 126 13751	47nF 10% 63V
2545	4822 126 14076	220nF 25V. 20%
2546	4822 126 13751	47nF 10% 63V
2547	4822 126 14076	220nF 25V 20%
2549	4822 122 33837	1nF 10% 50V
2553	4822 126 13838	100nF 50V 20%
2554	4822 126 13751	47nF 10% 63V
2555	4822 126 14076	220nF 25V 20%
2556	4822 126 13751	47nF 10% 63V
2557	4822 126 14076	220nF 25V 20%
2559	4822 122 33837	1nF 10% 50V
2561	4822 124 41584	100μF 20% 10V
2562	4822 124 40248	10μF 20% 63V
2563	4822 124 81151	22μF 50V
2566	4822 123 14026	470μF 35V 20%
2567	4822 123 14026	470μF 35V 20%
2574	4822 126 13751	47nF 10% 63V
2576	4822 126 13751	47nF 10% 63V
2584	4822 126 13751	47nF 10% 63V
2586	4822 126 13751	47nF 10% 63V

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3500	4822 051 20562	5k6 5% 0.1W 0805
3501	4822 051 20332	3k3 5% 0.1W
3502	4822 116 52289	5k6 5% 0.5W
3503	4822 051 20332	3k3 5% 0.1W
3504	4822 051 20562	5k6 5% 0.1W 0805
3505	4822 051 20332	3k3 5% 0.1W
3506	4822 051 20562	5k6 5% 0.1W 0805
3507	4822 051 20332	3k3 5% 0.1W
3541	4822 117 10834	47k 1% 0.1W
3542	4822 116 83961	6k8 5%
3543	4822 116 52234	100k 5% 0.5W
3544▲	4822 052 10828	8Ω2 5% 0.33W
3545	4822 116 52234	100k 5% 0.5W
3546▲	4822 052 10828	8Ω2 5% 0.33W
3547	4822 116 52234	100k 5% 0.5W
3548	4822 117 10833	10k 1% 0.1W
3552	4822 116 83961	6k8 5%
3553	4822 116 52234	100k 5% 0.5W
3554▲	4822 052 10828	8Ω2 5% 0.33W
3555	4822 116 52234	100k 5% 0.5W
3556▲	4822 052 10828	8Ω2 5% 0.33W
3557	4822 051 20223	22k 5% 0.1W
3558	4822 051 20472	4k7 5% 0.1W
3560	4822 117 10834	47k 1% 0.1W
3561	4822 117 10834	47k 1% 0.1W
3562	4822 051 20471	470Ω 5% 0.1W
3563	4822 117 10837	100k 1% 0.1W
3564	4822 116 83883	470Ω 5% 0.5W
3565	4822 117 10837	100k 1% 0.1W

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7540	4822 209 32641	TDA2616Q
7550	4822 209 32641	TDA2616Q
7560	4822 130 60511	BC847B
7561	4822 130 60511	BC847B
7562	4822 130 60373	BC856B
7567	4822 130 60511	BC847B
7568	4822 130 60511	BC847B

AV Control [AVC]

Various

0301	4822 265 31001	CON 5P
0302	2422 025 16007	CON 23P
0304	2422 025 08334	CON 13P
0305	4822 265 31001	CON 5P
0306	4822 265 41462	CON 7P
0310	2422 025 16187	CON 7P
0312	2422 025 16188	CON 15P
0315	5322 255 40958	CON 8P
0316	2422 486 80838	CON 42P
0332	4822 267 51477	CON 15P
0334	4822 267 10735	CON 3P (COMPAIR)
0335	4822 265 11151	CINCH SOCKET (4)
0336	4822 267 51477	CON SUB D 15P
0360	2422 025 16405	CON 8P
1210	4822 242 10808	X-TAL 10MHz
1220	4822 242 81525	X-TAL 2.00MHz
1600▲	4822 071 52001	FUSE (200MA)
1601▲	4822 071 52001	FUSE (200MA)

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2200	5322 121 42498	680nF 5% 63V
2201	5322 121 42498	680nF 5% 63V
2202	4822 126 13486	15pF 2% 63V
2203	4822 121 41857	10nF 5% 250V
2204	5322 121 42386	100nF 5% 63V
2205	4822 126 13486	15pF 2% 63V
2206	4822 124 22652	2.2μF 20% 50V
2207	4822 124 40248	10μF 20% 63V
2212	4822 124 40248	10μF 20% 63V
2215	4822 124 22652	2.2μF 20% 50V
2220	5322 121 42498	680nF 5% 63V
2221	5322 121 42498	680nF 5% 63V
2222	4822 126 13486	15pF 2% 63V
2223	4822 121 41857	10nF 5% 250V
2224	5322 121 42386	100nF 5% 63V
2225	4822 126 13486	15pF 2% 63V
2226	4822 124 22652	2.2μF 20% 50V
2227	4822 124 40248	10μF 20% 63V
2231	4822 126 13692	47pF 1% 63V
2232	4822 124 40248	10μF 20% 63V
2234	4822 126 13692	47pF 1% 63V
2235	4822 124 22652	2.2μF 20% 50V
2236	4822 126 13486	15pF 2% 63V
2237	4822 124 40248	10μF 20% 63V
2238	4822 126 13692	47pF 1% 63V
2240	4822 124 41584	100μF 20% 10V
2241	4822 126 13692	47pF 1% 63V
2244	4822 126 13692	47pF 1% 63V
2246	4822 126 13486	15pF 2% 63V
2247	4822 124 40248	10μF 20% 63V
2248	4822 126 13692	47pF 1% 63V
2300	4822 122 33177	10nF 20% 50V
2301	4822 122 33177	10nF 20% 50V
2302	4822 126 14585	100nF 10% 50V
2303	4822 122 33177	10nF 20% 50V
2304	4822 126 13849	220nF 10% 16V
2305	4822 126 14585	100nF 10% 50V
2307	4822 126 13849	220nF 10% 16V
2308	4822 126 14585	100nF 10% 50V
2310	4822 126 13849	220nF 10% 16V
2311	4822 126 14585	100nF 10% 50V
2312	4822 124 40433	47μF 20% 25V
2313	4822 124 40433	47μF 20% 25V
2314	4822 124 40769	4.7μF 20% 100V
2330	4822 124 40433	47μF 20% 25V
2340	4822 124 40433	47μF 20% 25V
2350	4822 124 40433	47μF 20% 25V
2360	4822 126 14585	100nF 10% 50V
2370	4822 126 14585	100nF 10% 50V
2400	4822 126 14585	100nF 10% 50V
2401	4822 126 14585	100nF 10% 50V
2402	4822 126 14585	100nF 10% 50V
2403	4822 126 14585	100nF 10% 50V
2404	4822 126 14585	100nF 10% 50V
2407	4822 126 14585	100nF 10% 50V
2413	4822 126 14585	100nF 10% 50V
2414	4822 126 14585	100nF 10% 50V
2415	4822 126 14585	100nF 10% 50V
2416	4822 126 14585	100nF 10% 50V
2420	4822 126 14585	100nF 10% 50V
2421	4822 124 41584	100μF 20% 10V
2422	4822 126 14585	100nF 10% 50V
2423	4822 126 14585	100nF 10% 50V
2424	4822 126 14585	100nF 10% 50V
2440	4822 126 14585	100nF 10% 50V
2450	4822 126 14585	100nF 10% 50V
2451	4822 126 14585	100nF 10% 50V
2452	4822 126 14585	100nF 10% 50V
2453	4822 126 14585	100nF 10% 50V
2454	4822 126 14585	100nF 10% 50V
2456	4822 126 14585	100nF 10% 50V
2473	4822 126 14585	100nF 10% 50V
2493	4822 126 14585	100nF 10% 50V
2494	4822 126 14585	100nF 10% 50V
2495	4822 126 14585	100nF 10% 50V
2780	4822 126 14585	100nF 10% 50V
2783	4822 126 14585	100nF 10% 50V
2800	4822 126 14585	100nF 10% 50V
2802	4822 126 14585	100nF 10% 50V
2804	4822 126 14585	100nF 10% 50V
2810	4822 124 80791	470μF 16V 20%
2811	5322 122 32654	22nF 10% 63V
2812	4822 124 40248	10μF 20% 63V
2822	4822 124 40248	10μF 20% 63V
2832	4822 124 40248	10μF 20% 63V
2900	5322 122 31863	63V 330pF
2901	4822 124 21913	1μF 20% 63V
2902	4822 126 14585	100nF 10% 50V
2903	4822 124 40207	100μF 20% 25V
2904	4822 124 40433	47μF 20% 25V
2905	4822 126 13751	47nF 10% 63V
2908	4822 126 13751	47nF 10% 63V
2909	4822 126 13751	47nF 10% 63V
2910	4822 126 14585	100nF 10% 50V
2911	4822 126 14585	100nF 10% 50V
2912	4822 126 13751	47nF 10% 63V
2913	5322 122 31865	1.5nF 10% 63V
2914	5322 122 32268	470pF 10% 50V
2915	4822 121 51252	470nF 5% 63V
2920	5322 122 31863	63V 330pF PM5
2921	4822 124 21913	1μF 20% 63V
2922	4822 126 14585	100nF 10% 50V
2923	4822 124 40207	100μF 20% 25V
2924	4822 124 40433	47μF 20% 25V
2925	4822 126 13751	47nF 10% 63V
2928	4822 126 13751	47nF 10% 63V
2929	4822 126 13751	47nF 10% 63V
2930	4822 122 33575	220pF 5% 63V
2931	4822 122 33575	220pF 5% 63V
2932	4822 126 13751	47nF 10% 63V
2933	5322 122 31865	1.5nF 10% 63V
2934	5322 122 32268	470pF 10% 50V
2935	4822 121 51252	470nF 5% 63V
2940	4822 126 14585	100nF 10% 50V
2941	4822 124 40207	100μF 20% 25V
2942	4822 126 13188	15nF 5% 63V
2943	4822 126 13188	15nF 5% 63V
2944	4822 126 12105	50V 33nF
2945	4822 122 32646	5.6nF 10% 50V
2946	4822 122 32646	5.6nF 10% 50V
2947	4822 126 12105	50V 33nF
2948	4822 121 51252	470nF 5% 63V
2949	4822 121 51252	470nF 5% 63V
2950	4822 121 51252	470nF 5% 63V
2951	4822 121 51252	470nF 5% 63V

2952	4822 124 40248	10µF 20% 63V
2955	5322 122 31647	1nF 10% 63V
2956	4822 124 22652	2.2µF 20% 50V
2957	5322 122 31863	63V 330pF
2960	5322 122 31647	1nF 10% 63V
2961	4822 124 22652	2.2µF 20% 50V
2962	5322 122 31863	63V 330pF
2963	4822 126 14585	100nF 10% 50V
2971	4822 124 21913	1µF 20% 63V
2972	4822 122 32627	2.7nF 10% 50V
2973	4822 126 13486	15pF 2% 63V
2975	5322 122 32268	470pF 10% 50V
2982	4822 124 40248	10µF 20% 63V
2984	4822 124 40248	10µF 20% 63V
2991	4822 124 21913	1µF 20% 63V
2992	4822 122 32627	2.7nF 10% 50V
2993	4822 126 13486	15pF 2% 63V
2995	5322 122 32268	470pF 10% 50V

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3200	4822 051 20393	39k 5% 0.1W
3201	4822 051 10102	1k 2% 0.25W
3202	4822 051 10102	1k 2% 0.25W
3205	4822 051 20101	100Ω 5% 0.1W
3206	4822 051 10102	1k 2% 0.25W
3207	4822 051 10102	1k 2% 0.25W
3208	4822 051 20472	4k7 5% 0.1W
3209	4822 117 10837	100k 1% 0.1W
3210	4822 051 20334	330k 5% 0.1W
3211	4822 051 20472	4k7 5% 0.1W
3212	4822 051 10102	1k 2% 0.25W
3213	4822 051 20391	390Ω 5% 0.1W
3216	4822 051 20101	100Ω 5% 0.1W
3218	4822 051 20101	100Ω 5% 0.1W
3220	4822 051 20393	39k 5% 0.1W
3221	4822 051 10102	1k 2% 0.25W
3222	4822 051 10102	1k 2% 0.25W
3225	4822 051 20101	100Ω 5% 0.1W
3226	4822 051 10102	1k 2% 0.25W
3227	4822 051 10102	1k 2% 0.25W
3228	4822 051 20472	4k7 5% 0.1W
3229	4822 117 10837	100k 1% 0.1W
3230	4822 051 20334	330k 5% 0.1W
3231	4822 051 20472	4k7 5% 0.1W
3232	4822 051 10102	1k 2% 0.25W
3233	4822 051 20391	390Ω 5% 0.1W
3236	4822 051 20008	0Ω jumper . (0805)
3237	4822 051 20392	3k9 5% 0.1W
3238	4822 051 20333	33k 5% 0.1W
3239	4822 051 20101	100Ω 5% 0.1W
3240	4822 051 20472	4k7 5% 0.1W
3241	4822 051 20472	4k7 5% 0.1W
3242	4822 117 10833	10k 1% 0.1W
3244	4822 117 10833	10k 1% 0.1W
3246	4822 051 20008	0Ω jumper . (0805)
3247	4822 051 20392	3k9 5% 0.1W
3248	4822 051 20333	33k 5% 0.1W
3249	4822 051 20101	100Ω 5% 0.1W
3300	4822 051 10102	1k 2% 0.25W
3301	4822 051 10102	1k 2% 0.25W
3302	4822 051 10102	1k 2% 0.25W
3304▲	4822 052 10478	4Ω7 5% 0.33W
3305	4822 051 20101	100Ω 5% 0.1W
3306	4822 051 20101	100Ω 5% 0.1W
3307	4822 117 11448	180Ω 1% 0.1W
3309	4822 117 11448	180Ω 1% 0.1W
3311	4822 117 11448	180Ω 1% 0.1W
3312▲	4822 052 10478	4Ω7 5% 0.33W
3313	4822 051 20274	270k 5% 0.1W
3314	4822 051 20394	390k 5% 0.1W
3315	4822 051 20479	47Ω 5% 0.1W
3316	4822 051 20479	47Ω 5% 0.1W
3317	4822 051 20479	47Ω 5% 0.1W
3320	4822 117 11449	2k2 1% 0.1W
3321	4822 051 10102	1k 2% 0.25W
3322	4822 117 11449	2k2 1% 0.1W
3323	4822 051 10102	1k 2% 0.25W
3324	4822 117 11449	2k2 1% 0.1W
3325	4822 051 10102	1k 2% 0.25W
3330	4822 051 20562	5k6 5% 0.1W
3331	4822 051 20472	4k7 5% 0.1W
3335	4822 051 20562	5k6 5% 0.1W
3336	4822 051 20472	4k7 5% 0.1W
3340	4822 051 20562	5k6 5% 0.1W
3341	4822 051 20472	4k7 5% 0.1W
3345	4822 051 20562	5k6 5% 0.1W
3346	4822 051 20472	4k7 5% 0.1W
3347	4822 051 10102	1k 2% 0.25W
3348	4822 051 10102	1k 2% 0.25W
3349	4822 051 10102	1k 2% 0.25W
3350	4822 051 20562	5k6 5% 0.1W
3351	4822 051 20472	4k7 5% 0.1W
3355	4822 051 20562	5k6 5% 0.1W
3356	4822 051 20472	4k7 5% 0.1W
3360	4822 051 20472	4k7 5% 0.1W
3361	4822 117 10833	10k 1% 0.1W
3362	4822 051 20223	22k 5% 0.1W
3400	4822 051 20471	470Ω 5% 0.1W
3401	4822 117 11449	2k2 1% 0.1W
3402	4822 117 11449	2k2 1% 0.1W
3403	4822 051 20562	5k6 5% 0.1W
3404	4822 117 10833	10k 1% 0.1W
3405	4822 051 20332	3k3 5% 0.1W
3406	4822 117 10361	680Ω 1% 0.1W
3407	4822 117 10361	680Ω 1% 0.1W
3408	4822 051 20101	100Ω 5% 0.1W
3409	4822 117 10833	10k 1% 0.1W
3410	4822 117 10833	10k 1% 0.1W
3411	4822 051 20472	4k7 5% 0.1W
3412	4822 051 20472	4k7 5% 0.1W
3413	4822 051 20472	4k7 5% 0.1W
3414	4822 051 20472	4k7 5% 0.1W
3415	4822 117 11449	2k2 1% 0.1W
3433	4822 117 10833	10k 1% 0.1W
3434	4822 051 20472	4k7 5% 0.1W
3435	4822 051 20472	4k7 5% 0.1W
3436	4822 051 20472	4k7 5% 0.1W
3437	4822 117 11449	2k2 1% 0.1W
3438	4822 117 11449	2k2 1% 0.1W
3439	4822 117 11449	2k2 1% 0.1W
3440	4822 117 11449	2k2 1% 0.1W
3442	4822 051 20562	5k6 5% 0.1W
3443	4822 051 20101	100Ω 5% 0.1W
3444	4822 117 10833	10k 1% 0.1W
3450	4822 051 20101	100Ω 5% 0.1W
3451	4822 051 20101	100Ω 5% 0.1W
3460	4822 051 20101	100Ω 5% 0.1W
3461	4822 051 20101	100Ω 5% 0.1W
3462	4822 051 20101	100Ω 5% 0.1W
3463	4822 051 20101	100Ω 5% 0.1W
3464	4822 051 20101	100Ω 5% 0.1W
3465	4822 051 20101	100Ω 5% 0.1W
3466	4822 051 20472	4k7 5% 0.1W
3467	4822 117 10833	10k 1% 0.1W
3469	4822 117 10833	10k 1% 0.1W
3471	4822 117 10833	10k 1% 0.1W
3473	4822 117 10833	10k 1% 0.1W
3480	4822 051 20101	100Ω 5% 0.1W
3481	4822 051 20471	470Ω 5% 0.1W
3482	4822 051 20101	100Ω 5% 0.1W
3490	4822 051 20101	100Ω 5% 0.1W
3491	4822 051 20101	100Ω 5% 0.1W
3492	4822 051 20101	100Ω 5% 0.1W
3495	4822 051 20101	100Ω 5% 0.1W
3497	4822 051 20101	100Ω 5% 0.1W
3780	4822 051 20472	4k7 5% 0.1W
3781	4822 051 10102	1k 2% 0.25W
3783	4822 051 10102	1k 2% 0.25W
3784	4822 051 20472	4k7 5% 0.1W
3800	4822 116 52201	75Ω 5% 0.5W
3802	4822 116 52201	75Ω 5% 0.5W
3804	4822 116 52201	75Ω 5% 0.5W
3806	4822 051 20101	100Ω 5% 0.1W
3807	4822 051 20101	100Ω 5% 0.1W
3808	4822 051 20101	100Ω 5% 0.1W
3809	4822 051 20101	100Ω 5% 0.1W
3810▲	4822 052 10478	4Ω7 5% 0.33W
3811	4822 117 13577	330Ω 1% RC12H
3812	4822 117 10837	100k 1% 0.1W
3813	4822 116 52201	75Ω 5% 0.5W
3814	4822 117 10353	150Ω 1% 0.1W
3815	4822 117 10353	150Ω 1% 0.1W
3816	4822 051 20223	22k 5% 0.1W
3821	4822 117 13577	330Ω 1% RC12H
3822	4822 117 10837	100k 1% 0.1W
3823	4822 116 52201	75Ω 5% 0.5W
3824	4822 117 10353	150Ω 1% 0.1W
3825	4822 117 10353	150Ω 1% 0.1W
3826	4822 051 20223	22k 5% 0.1W
3827	4822 051 20101	100Ω 5% 0.1W
3831	4822 117 13577	330Ω 1% RC12H
3832	4822 117 10837	100k 1% 0.1W
3833	4822 116 52201	75Ω 5% 0.5W
3834	4822 117 10353	150Ω 1% 0.1W
3835	4822 117 10353	150Ω 1% 0.1W
3836	4822 051 20223	22k 5% 0.1W
3900	4822 116 52219	330Ω 5% 0.5W
3901	4822 117 10353	150Ω 1% 0.1W
3902	4822 117 13579	220k 1% RC12H
3903	4822 117 11383	12k 1% 0.1W
3904	4822 051 20822	8k2 5% 0.1W
3905	4822 117 11383	12k 1% 0.1W
3906	4822 051 20229	22Ω 5% 0.1W
3907	4822 051 20101	100Ω 5% 0.1W
3908	4822 051 20101	100Ω 5% 0.1W
3909	4822 051 20101	100Ω 5% 0.1W
3910	4822 051 20229	22Ω 5% 0.1W
3913	4822 051 20562	5k6 5% 0.1W
3916	4822 117 11383	12k 1% 0.1W
3917	4822 117 10833	10k 1% 0.1W
3920	4822 116 52219	330Ω 5% 0.5W
3921	4822 117 10353	150Ω 1% 0.1W
3922	4822 117 13579	220k 1% RC12H
3923	4822 117 11383	12k 1% 0.1W
3924	4822 051 20822	8k2 5% 0.1W
3925	4822 117 11383	12k 1% 0.1W
3926	4822 051 20229	22Ω 5% 0.1W
3927	4822 051 20101	100Ω 5% 0.1W
3928	4822 051 20101	100Ω 5% 0.1W
3929	4822 051 20101	100Ω 5% 0.1W
3930	4822 051 20229	22Ω 5% 0.1W
3933	4822 051 20562	5k6 5% 0.1W
3934	4822 051 20105	1M 5% 0.1W
3936	4822 117 11383	12k 1% 0.1W
3937	4822 117 10833	10k 1% 0.1W
3940▲	4822 052 10478	4Ω7 5% 0.33W
3941	4822 051 20101	100Ω 5% 0.1W
3942	4822 051 20101	100Ω 5% 0.1W
3950	4822 051 20471	470Ω 5% 0.1W
3951	4822 117 13579	220k 1% RC12H
3952	4822 117 13577	330Ω 1% RC12H
3953	4822 116 83868	150Ω 5% 0.5W
3955	4822 051 20471	470Ω 5% 0.1W
3956	4822 117 13579	220k 1% RC12H
3957	4822 117 13577	330Ω 1% RC12H
3958	4822 116 83868	150Ω 5% 0.5W
3965	4822 117 10837	100k 1% 0.1W
3966	4822 117 10837	100k 1% 0.1W
3967	4822 116 52175	100Ω 5% 0.5W
3968	4822 117 10837	100k 1% 0.1W
3970	4822 117 10837	100k 1% 0.1W
3971	4822 117 11507	6k8 1% 0.1W
3973	4822 051 20101	100Ω 5% 0.1W
3974	4822 051 20472	4k7 5% 0.1W
3975	4822 117 11507	6k8 1% 0.1W
3976	4822 117 11507	6k8 1% 0.1W
3978	4822 117 10837	100k 1% 0.1W
3981	4822 051 20392	3k9 5% 0.1W
3982	4822 051 20822	8k2 5% 0.1W
3983	4822 051 20392	3k9 5% 0.1W
3984	4822 051 20822	8k2 5% 0.1W
3991	4822 117 11507	6k8 1% 0.1W
3993	4822 051 20101	100Ω 5% 0.1W
3994	4822 051 20472	4k7 5% 0.1W
3995	4822 117 11507	6k8 1% 0.1W
3996	4822 117 11507	6k8 1% 0.1W
3999	4822 051 10102	1k 2% 0.25W
4xxx	4822 051 10008	0Ω 5% 0.25W (1206)
4xxx	4822 051 20008	0Ω 5% 0.25W (0805)

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5422	4822 158 10604	6.8 µH
5441	4822 158 10604	6.8 µH
5493	4822 158 10604	6.8 µH
5900	4822 158 10604	6.8 µH
5920	4822 158 10604	6.8 µH

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6200	4822 130 83757	BAS216
6208	4822 130 83757	BAS216
6220	4822 130 83757	BAS216
6228	4822 130 83757	BAS216
6450	4822 130 11027	BZX284-C33
6451	4822 130 11027	BZX284-C33
6452	4822 130 11027	BZX284-C33
6453	4822 130 11027	BZX284-C33
6464	4822 130 10654	BAT254
6465	4822 130 10654	BAT254
6481	4822 130 11027	BZX284-C33
6482	4822 130 11027	BZX284-C33
6483	4822 130 11027	BZX284-C33
6484	4822 130 11027	BZX284-C33
6490	4822 130 11027	BZX284-C33
6491	4822 130 11027	BZX284-C33
6494	4822 130 11027	BZX284-C33
6495	4822 130 11027	BZX284-C33
6496	4822 130 11027	BZX284-C33
6497	4822 130 11027	BZX284-C33

6780	4822 130 11027	BZX284-C33
6781	4822 130 11027	BZX284-C33
6783	4822 130 11027	BZX284-C33
6784	4822 130 11027	BZX284-C33
6800	4822 130 11027	BZX284-C33
6801	4822 130 11027	BZX284-C33
6802	4822 130 11027	BZX284-C33
6803	4822 130 11027	BZX284-C33
6804	4822 130 11027	BZX284-C33
6805	4822 130 11027	BZX284-C33
6806	4822 130 11027	BZX284-C33
6810	4822 130 11027	BZX284-C33
6811	4822 130 11027	BZX284-C33
6812	4822 130 11027	BZX284-C33
6813	4822 130 11027	BZX284-C33
6820	4822 130 11027	BZX284-C33
6821	4822 130 11027	BZX284-C33
6830	4822 130 11027	BZX284-C33
6831	4822 130 11027	BZX284-C33
6900	4822 130 11027	BZX284-C33
6901	4822 130 11027	BZX284-C33
6920	4822 130 11027	BZX284-C33
6921	4822 130 11027	BZX284-C33
6925	4822 130 42488	BYD33D
6950	4822 130 11027	BZX284-C33
6951	4822 130 11027	BZX284-C33
6960	4822 130 11027	BZX284-C33
6961	4822 130 11027	BZX284-C33
6967	4822 130 83757	BAS216
6968	4822 130 83757	BAS216
6969	4822 130 83757	BAS216
6970	4822 130 83757	BAS216
6971	4822 130 11027	BZX284-C33

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7200	4822 209 83163	LM833N
7202	4822 130 60511	BC847B
7203	4822 130 60511	BC847B
7220	4822 209 83163	LM833N
7222	4822 130 60511	BC847B
7223	4822 130 60511	BC847B
7250	4822 209 83163	LM833N
7300	4822 209 16248	TDA4885/V2
7305	4822 130 44154	BF199
7308	4822 130 44154	BF199
7311	4822 130 44154	BF199
7320	4822 130 42131	BF550
7322	4822 130 42131	BF550
7324	4822 130 42131	BF550
7330	5322 130 42718	BFS20
7335	5322 130 42718	BFS20
7340	5322 130 42718	BFS20
7345	5322 130 42718	BFS20
7350	5322 130 42718	BFS20
7355	5322 130 42718	BFS20
7360	5322 209 11296	74HC4053N
7361	4822 209 73852	PMBT2369
7370	5322 209 11598	PC74HCT4538T
7411	4822 130 60373	BC856B
7414	5322 209 71568	PC74HCT14T
7420	9337 570 50653	74HCT126D
7430	4822 130 60511	BC847B
7440	5322 209 11473	74HCT86N
7460	4822 130 60511	BC847B
7461	4822 130 60511	BC847B
7462	4822 130 60511	BC847B
7491	4822 130 60511	BC847B
7810	4822 130 44568	BC557B
7811	4822 130 60511	BC847B
7820	4822 130 44568	BC557B
7821	4822 130 60511	BC847B
7830	4822 130 44568	BC557B
7831	4822 130 60511	BC847B
7910	4822 209 90023	NJU9702D
7920	4822 209 90023	NJU9702D
7940	4822 209 33293	TDA9860/V2
7965	4822 130 60373	BC856B
7968	9340 547 13215	FET BSH103
7969	9340 547 13215	FET BSH103
7970	4822 209 30095	LM833D
7971	9340 547 13215	FET BSH103
7972	9340 547 13215	FET BSH103

PDP discharge [FD]

Various

0010	2422 025 11143	CON 3P
0011	4822 265 20582	CON 2P
0012	2422 025 09014	CON 6P
0013	2422 025 12827	CON 9P
0014	2422 025 12827	CON 9P
0015	2422 025 15085	CON 10P
0016	2422 025 15085	CON 10P

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2201	4822 124 40248	10µF 20% 63V
2202	5322 122 31647	1nF 10% 63V
2203	2020 021 90111	100µF 10V 20%
2204	4822 124 40248	10µF 20% 63V
2205	4822 124 80791	470µF 16V 20%
2206	4822 124 22466	1µF 20% 50V

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3200	4822 117 10834	47k 1% 0.1W
3201	2120 109 09275	2M7 5% 0805
3202	2322 257 41102	1k 5% 5W
3203	2322 257 41103	10k 5% 5W
3204	2322 662 96201	PTC 26Ω 265V
3205	4822 117 12063	NTC 10k 5% 5W
3207	4822 117 10833	10k 1% 0.1W
3208	4822 051 20223	22k 5% 0.1W
3209	4822 117 11504	270Ω 1% 0.1W
3211	4822 050 21003	10k 1% 0.6W
3212	4822 050 25602	5k6 1% 0.6W
3213	4822 116 52245	150k 5% 0.5W
3214	4822 050 21003	10k 1% 0.6W
3215	4822 117 10833	10k 1% 0.1W
3216	4822 117 10833	10k 1% 0.1W
3217	4822 051 20223	22k 5% 0.1W
3218	4822 117 10833	10k 1% 0.1W
3219	4822 050 22202	2k2 1% 0.6W
3220	4822 051 20333	33k 5% 0.1W
3221	4822 050 27503	75k 1% 0.6W
3222	4822 051 10102	1k 2% 0.25W

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6202	4822 130 81637	PMLL4148L
6203	4822 130 81637	PMLL4148L

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7200	4822 130 60373	BC856B
7201	4822 130 63798	IRFIBC40G
7202	4822 130 60511	BC847B
7203	4822 130 63798	IRFIBC40G
7204	4822 209 32126	SOC1012T
7205	4822 130 11336	STP16NE06FP
7206	4822 209 70672	LM358N
7211	4822 130 60511	BC847B

VsVa supply [FD]

Various

0111▲	4822 265 11253	FUSE HOLDER
0309	2422 025 08334	CON 13P
0310	4822 265 31001	CON 5P
0312	4822 267 10574	CON 8P
0313	4822 265 31001	CON 5P
0314	4822 265 41392	CON 7P
0315	2422 025 12482	CON 6P
0317	2422 025 15085	CON 10P
0319	2422 025 12827	CON 9P
0320▲	4822 265 11253	FUSE HOLDER
0326	3122 421 60171	SPRING
0327	3122 421 60171	SPRING
0328	3122 121 24785	SPRING
0329	3122 421 60171	SPRING
0330	3122 421 60171	SPRING
0335	3104 304 90271	INSULATING PLATE
0336	3104 304 90271	INSULATING PLATE
0337	3111 101 04822	HEATSINK CLIP
0338	3111 101 04822	HEATSINK CLIP
0340	3122 121 24785	SPRING
0341	3122 421 60171	SPRING
1004▲	4822 070 32002	FUSE (2A)
1005▲	4822 252 51173	FUSE (1,0A)
1101▲	2422 086 10908	FUSE 1,0A
1102▲	4822 252 11169	FUSE (4,0A)
1103▲	4822 252 11169	FUSE (4,0A)
1104▲	4822 252 11169	FUSE (4,0A)
1105▲	4822 252 11169	FUSE (4,0A)
1201▲	4822 071 55002	FUSE (5A)
1202▲	4822 071 55002	FUSE (5A)

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2001	4822 124 11561	47µF 20% 400V
2002	4822 124 41751	47µF 20% 50V
2003	4822 124 80061	1000µF 20% 25V
2004	2222 464 90017	200P 630V 1%
2005	4822 121 51288	100pF 630V
2006	5322 122 32331	1nF 10% 100V
2007	5322 121 42386	100nF 5% 63V
2008	4822 121 70162	10nF 5% 400V
2009	4822 124 22652	2.2µF 20% 50V
2010	4822 121 70162	10nF 5% 400V
2011	2222 375 90442	47nF 1KV 5%
2012	4822 126 13864	330pF 10% 2KV
2013	4822 126 13864	330pF 10% 2KV
2014	4822 126 13862	1.5nF 10% 2KV
2015	4822 121 41857	10nF 5% 250V
2016	5322 121 42661	330nF 5% 63V
2018	5322 121 42386	100nF 5% 63V
2020	2222 157 52152	1500µF 200V 20%
2021	2222 157 52152	1500µF 200V 20%
2022	4822 123 14026	35V 470µF 20%
2023	5322 121 42386	100nF 5% 63V
2024	4822 121 51319	1µF 10% 63V
2025	2022 333 00077	180nF 250V 5%
2026	5322 122 32818	2.2nF 10% 100V
2027	4822 121 51305	15nF 10% 50V
2028	4822 126 14126	47pF 5% 2KV
2029	4822 126 13337	220pF 10% 1KV
2030▲	4822 126 14208	220pF 20% 250V
2032	4822 124 22652	2.2µF 20% 50V
2033	5322 121 42386	100nF 5% 63V
2034	4822 126 11979	27pF 5% 2KV
2035	5322 122 32331	1nF 10% 100V
2036	4822 121 43179	18nF 5% 100V
2037	5322 121 42386	100nF 5% 63V
2038	5322 121 42386	100nF 5% 63V
2101	2222 151 90002	22µF 400V 20%
2102	4822 124 41751	47µF 20% 50V
2103	4822 124 11767	470µF 20% 25V
2104	5322 121 51214	680pF 1% 400V
2105	2222 464 90004	130P 630V 1%
2106	5322 122 32331	1nF 10% 100V
2107	5322 121 42386	100nF 5% 63V
2108	4822 121 41857	10nF 5% 250V
2109	4822 124 22652	2.2µF 20% 50V
2110	4822 121 70162	10nF 5% 400V
2111	2222 375 90224	39nF 1KV 5%
2112	4822 126 13862	1.5nF 10% 2KV
2113	4822 126 13862	1.5nF 10% 2KV
2114	4822 126 13451	2.2nF 10% 2KV
2115	4822 121 41857	10nF 5% 250V
2116	5322 121 42661	330nF 5% 63V
2117	4822 121 41857	10nF 5% 250V
2118	5322 121 42386	100nF 5% 63V
2120	2222 056 59222	2200µF 100V
2122	4822 124 12056	1000µF 20% 35V
2123	4822 124 41751	47µF 20% 50V
2124	4822 121 51472	39nF 5% 250V
2125	4822 122 33968	1nF 5% 500V
2126	5322 122 32818	2.2nF 10% 100V
2127	4822 121 41857	10nF 5% 250V
2128	4822 122 50116	470pF 10% 1KV
2129	4822 126 13337	220pF 10% 1KV
2130▲	4822 126 14208	220pF 20% 250V
2131	4822 126 13337	220pF 10% 1KV
2132	4822 124 22652	2.2µF 20% 50V
2133	4822 124 22652	2.2µF 20% 50V
2134	5322 121 42386	100nF 5% 63V
2135	5322 121 42386	100nF 5% 63V
2201	2020 021 91411	1000µF 35V 20%
2202	4822 124 22652	2.2µF 20% 50V
2203	4822 124 22652	2.2µF 20% 50V
2204	4822 124 23432	100µF 20% 10V
2205	4822 124 22652	2.2µF 20% 50V
2206	4822 121 10766	390pF 1% 630V
2207	2020 300 90565	2N7 50V 10%
2208	4822 121 70654	2N2 10% 50V
2209	5322 121 42386	100nF 5% 63V
2210	4822 121 43897	1nF 5% 400V
2211	4822 124 81145	1000µF 16V 20%
2212	4822 124 41584	100µF 20% 10V
2213	4822 124 40207	100µF 20% 25V
2214	5322 121 42386	100nF 5% 63V
2215	4822 126 13337	220pF 10% 1KV
2216	4822 126 13337	220pF 10% 1KV

2220	2020 021 91354	1000µF 50V 20%
2221	2020 021 91354	1000µF 50V 20%
2222	4822 122 30043	10nF 20% 63V
2223	5322 121 42386	100nF 5% 63V
2224	5322 121 42386	100nF 5% 63V
2302	4822 124 40207	100µF 20% 25V
2303	4822 124 40196	220µF 20% 16V
2304	4822 124 40433	47µF 20% 25V
2305	5322 121 42661	330nF 5% 63V
2306	4822 124 40433	47µF 20% 25V
2307	5322 121 42661	330nF 5% 63V
2308	4822 124 40433	47µF 20% 25V
2309	5322 121 42661	330nF 5% 63V
2310	4822 124 40433	47µF 20% 25V
2311	5322 121 42661	330nF 5% 63V
2312	4822 124 40433	47µF 20% 25V
2313	5322 121 42661	330nF 5% 63V
2314	5322 121 42386	100nF 5% 63V
2315	5322 121 42386	100nF 5% 63V
2316	5322 121 42386	100nF 5% 63V
2317	5322 121 42386	100nF 5% 63V
2318	5322 121 42386	100nF 5% 63V
2319	4822 124 40433	47µF 20% 25V
2320	5322 122 32331	1nF 10% 100V
2321	5322 121 42386	100nF 5% 63V
2322	5322 121 42386	100nF 5% 63V
2323	5322 121 42386	100nF 5% 63V
2324	5322 121 42386	100nF 5% 63V

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3001	4822 117 13473	22k 5% 2.5W PR03
3002▲	4822 052 10229	22Ω 5% 0.33W
3003	4822 116 52234	100k 5% 0.5W
3004	4822 116 52244	15k 5% 0.5W
3005	4822 116 83882	39k 5% 0.5W
3006	4822 050 21003	10k 1% 0.6W
3007	4822 116 52283	4k7 5% 0.5W
3008	4822 050 11002	1k 1% 0.4W
3009	4822 050 11002	1k 1% 0.4W
3010	4822 116 52238	12k 5% 0.5W
3011	4822 116 52226	560Ω 5% 0.5W
3012	4822 116 52283	4k7 5% 0.5W
3013	4822 050 21003	10k 1% 0.6W
3014	4822 116 52191	33Ω 5% 0.5W
3015	4822 116 52176	10Ω 5% 0.5W
3016	4822 050 11002	1k 1% 0.4W
3017	4822 116 52191	33Ω 5% 0.5W
3018	4822 116 52176	10Ω 5% 0.5W
3019	4822 050 11002	1k 1% 0.4W
3020	4822 116 52291	56k 5% 0.5W
3021	4822 053 11682	6k8 5% 2W
3022	4822 116 52219	330Ω 5% 0.5W
3023	4822 116 52303	8k2 5% 0.5W
3024	4822 050 21504	150k 1% 0.6W
3025	4822 116 52249	1k8 5% 0.5W
3026	4822 101 11383	470Ω 30% LIN
3027	4822 116 83884	47k 5% 0.5W
3029	4822 050 21503	15k 1% 0.6W
3030	4822 050 11002	1k 1% 0.4W
3031	4822 050 21003	10k 1% 0.6W
3032	4822 050 21003	10k 1% 0.6W
3033	4822 050 27504	750k 1% 0.6W
3034	4822 050 21003	10k 1% 0.6W
3035	4822 116 83872	220Ω 5% 0.5W
3036	4822 116 52175	100Ω 5% 0.5W
3037	4822 050 11002	1k 1% 0.4W
3038	4822 050 11002	1k 1% 0.4W
3039	4822 116 52219	330Ω 5% 0.5W
3040	4822 116 83874	220k 5% 0.5W
3041	4822 050 23303	33k 1% 0.6W
3042	4822 116 83883	470Ω 5% 0.5W
3043	4822 116 52283	4k7 5% 0.5W
3044	4822 050 11002	1k 1% 0.4W
3045	4822 050 11002	1k 1% 0.4W
3046	4822 053 20565	5M6 5% 0.25W
3047	4822 116 52245	150k 5% 0.5W
3048	4822 116 52283	4k7 5% 0.5W
3049	4822 050 21003	10k 1% 0.6W
3050▲	4822 052 10398	3Ω9 5% 0.33W
3056	4822 116 52219	330Ω 5% 0.5W
3057	4822 116 52219	330Ω 5% 0.5W
3058	4822 050 23303	33k 1% 0.6W
3059	4822 117 13473	22k 5% 2.5W PR03
3060	4822 053 20225	2M2 5% 0.25W
3061	4822 116 52291	56k 5% 0.5W
3062	4822 116 83884	47k 5% 0.5W
3063	4822 116 83872	220Ω 5% 0.5W
3064	4822 050 21003	10k 1% 0.6W
3065	4822 050 11002	1k 1% 0.4W
3066	4822 050 21003	10k 1% 0.6W
3067	4822 116 52244	15k 5% 0.5W
3068	4822 050 21003	10k 1% 0.6W
3069	4822 050 21003	10k 1% 0.6W
3070	4822 050 21003	10k 1% 0.6W
3071	4822 050 21003	10k 1% 0.6W
3072	4822 050 11002	1k 1% 0.4W
3073	4822 050 21003	10k 1% 0.6W
3074	4822 050 11002	1k 1% 0.4W
3075	4822 116 83884	47k 5% 0.5W
3076	4822 116 52283	4k7 5% 0.5W
3077	4822 116 83884	47k 5% 0.5W
3078	4822 116 52283	4k7 5% 0.5W
3099▲	4822 052 10108	1Ω 5% 0.33W
3100▲	4822 052 10109	10Ω 5% 0.33W
3101	4822 116 82107	68k 5% 3W
3102▲	4822 052 10229	22Ω 5% 0.33W
3103	4822 116 83884	47k 5% 0.5W
3104	4822 116 52257	22k 5% 0.5W
3105	4822 116 52244	15k 5% 0.5W
3106	4822 050 21003	10k 1% 0.6W
3107	4822 050 21003	10k 1% 0.6W
3108	4822 050 11002	1k 1% 0.4W
3109	4822 050 11002	1k 1% 0.4W
3110	4822 116 52238	12k 5% 0.5W
3111	4822 116 52226	560Ω 5% 0.5W
3112	4822 116 52283	4k7 5% 0.5W
3113	4822 050 21003	10k 1% 0.6W
3114	4822 116 52175	100Ω 5% 0.5W
3115	4822 116 52195	47Ω 5% 0.5W
3116	4822 050 11002	1k 1% 0.4W
3117	4822 116 52175	100Ω 5% 0.5W
3118	4822 116 52195	47Ω 5% 0.5W
3119	4822 050 11002	1k 1% 0.4W
3120	4822 116 52291	56k 5% 0.5W
3121	4822 053 11129	12Ω 5% 2W
3123	4822 116 52303	8k2 5% 0.5W
3124	4822 050 27503	75k 1% 0.6W
3125	4822 116 52256	2k2 5% 0.5W
3126	4822 101 11187	1k 30% LIN 0.1W
3127	4822 050 21003	10k 1% 0.6W
3128	4822 050 11002	1k 1% 0.4W
3129	4822 050 21503	15k 1% 0.6W
3130	4822 050 11002	1k 1% 0.4W
3131	4822 050 21003	10k 1% 0.6W
3132	4822 050 21003	10k 1% 0.6W
3133	4822 050 22614	261k 1% 0.6W
3134	4822 050 21003	10k 1% 0.6W
3135	4822 116 83872	220Ω 5% 0.5W
3136	4822 116 52175	100Ω 5% 0.5W
3137	4822 050 11002	1k 1% 0.4W
3138	4822 050 11002	1k 1% 0.4W
3139	4822 116 52219	330Ω 5% 0.5W
3140	4822 050 11002	1k 1% 0.4W
3157	4822 116 52219	330Ω 5% 0.5W
3164	4822 050 21003	10k 1% 0.6W
3165	4822 050 11002	1k 1% 0.4W
3166	4822 050 21003	10k 1% 0.6W
3170	4822 116 52257	22k 5% 0.5W
3171	4822 116 83884	47k 5% 0.5W
3172	4822 116 52283	4k7 5% 0.5W
3173	4822 116 83884	47k 5% 0.5W
3174	4822 116 52283	4k7 5% 0.5W
3175	4822 050 21003	10k 1% 0.6W
3176	4822 116 83884	47k 5% 0.5W
3177	4822 050 21003	10k 1% 0.6W
3179	4822 116 52228	680Ω 5% 0.5W
3180	4822 050 11002	1k 1% 0.4W
3181	4822 050 21003	10k 1% 0.6W
3182	4822 050 11002	1k 1% 0.4W
3201	4822 116 52244	15k 5% 0.5W
3202	4822 050 21003	10k 1% 0.6W
3203	4822 050 11002	1k 1% 0.4W
3204	4822 116 83882	39k 5% 0.5W
3205▲	4822 052 10159	15Ω 5% 0.33W
3206	4822 116 52283	4k7 5% 0.5W
3207	4822 116 52175	100Ω 5% 0.5W
3210	4822 116 52226	560Ω 5% 0.5W
3211	4822 116 52234	100k 5% 0.5W
3212	4822 050 21003	10k 1% 0.6W
3213	4822 050 21003	10k 1% 0.6W
3214	4822 116 52285	470k 5% 0.5W
3215	4822 050 21003	10k 1% 0.6W
3216	4822 050 21003	10k 1% 0.6W
3217	4822 050 21003	10k 1% 0.6W
3301	4822 050 13904	390k 1% 0.4W
3302	4822 050 21003	10k 1% 0.6W
3303	4822 050 21003	10k 1% 0.6W
3304	4822 116 52283	4k7 5% 0.5W
3305	4822 116 52244	15k 5% 0.5W
3306	4822 050 21003	10k 1% 0.6W
3307	4822 116 52256	2k2 5% 0.5W
3308	4822 050 11002	1k 1% 0.4W
3310	4822 050 21003	10k 1% 0.6W
3311	4822 117 12063	NTC 5W 10k 5%
3312	4822 116 83884	47k 5% 0.5W
3313	4822 116 83884	47k 5% 0.5W
3314	4822 050 11002	1k 1% 0.4W
3315	4822 050 21003	10k 1% 0.6W
3316	4822 116 83883	470Ω 5% 0.5W
3317	4822 116 52257	22k 5% 0.5W
3318	4822 050 11002	1k 1% 0.4W
3320	5322 117 11071	5Ω6 5% 3W
3321	2322 251 41569	56Ω 5W 5%
3322	4822 050 11002	1k 1% 0.4W
3323	4822 050 11002	1k 1% 0.4W
3324	4822 050 11002	1k 1% 0.4W
3325	4822 116 52228	680Ω 5% 0.5W
3331	2120 660 90042	PTC 330Ω 16V
3332	2120 660 90042	PTC 330Ω 16V
3333	4822 116 52263	2k7 5% 0.5W
3334	4822 050 21003	10k 1% 0.6W
3335	4822 050 21003	10k 1% 0.6W
3336	4822 116 52243	1k5 5% 0.5W
3337	4822 050 11002	1k 1% 0.4W
3338	4822 116 52283	4k7 5% 0.5W
3339	4822 116 83872	220Ω 5% 0.5W
3340	4822 116 52283	4k7 5% 0.5W
3343	4822 116 52283	4k7 5% 0.5W
3346	4822 116 52283	4k7 5% 0.5W
3349	4822 116 52283	4k7 5% 0.5W
3352	4822 116 52283	4k7 5% 0.5W
3355	4822 050 11002	1k 1% 0.4W
3356	4822 116 52283	4k7 5% 0.5W
3360	4822 116 83874	220k 5% 0.5W
3361	4822 116 52303	8k2 5% 0.5W
3362	4822 116 52297	68k 5% 0.5W
3363	4822 050 21003	10k 1% 0.6W
3364	4822 050 21003	10k 1% 0.6W
3365	4822 116 52283	4k7 5% 0.5W
3366	4822 050 21003	10k 1% 0.6W
3370	4822 050 11002	1k 1% 0.4W
3371	4822 050 11002	1k 1% 0.4W
3372	4822 116 52228	680Ω 5% 0.5W
3373	4822 050 11002	1k 1% 0.4W
3374	4822 050 11002	1k 1% 0.4W
3375	4822 050 11002	1k 1% 0.4W
3376	4822 050 11002	1k 1% 0.4W
3377	4822 050 21003	10k 1% 0.6W
3378	4822 116 83883	470Ω 5% 0.5W
3379	4822 116 52283	4k7 5% 0.5W
3380	4822 116 52199	68Ω 5% 0.5W
3381	4822 116 52228	680Ω 5% 0.5W
3382	4822 050 11002	1k 1% 0.4W
3383	4822 050 11002	1k 1% 0.4W
3384	4822 050 11002	1k 1% 0.4W
3385	4822 116 52228	680Ω 5% 0.5W
3386	4822 116 83883	470Ω 5% 0.5W
3387	4822 050 11002	1k 1% 0.4W
3388	4822 116 52257	22k 5% 0.5W
3389	4822 050 11002	1k 1% 0.4W
3390	4822 050 21003	10k 1% 0.6W
3391	4822 050 11002	1k 1% 0.4W
3392	4822 050 11002	1k 1% 0.4W
3393	4822 050 11002	1k 1% 0.4W
3999	4822 050 11002	1k 1% 0.4W

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5001	3128 138 38561	DRIVER TRANSF.
5002▲	3128 138 38731	RESONANT TRANSF
5003	4822 157 71442	150µH 10%
5004	4822 158 10604	6.8 µH
5101	3128 138 38561	DRIVER TRANSF.
5102▲	3128 138 38721	LLC TRANSFORMER
5103	4822 157 11017	330µH 10%
5104	4822 157 11411	BEAD 100MHz
5201	3128 138 38771	LLC TRANSFORMER
5202	4822 157 10452	10µH 10%
5203	4822 157 71467	39U 10%
5204	4822 157 71467	39U 10%
5205	4822 157 71467	39U 10%
5206	4822 157 11411	BEAD 100MHz
5207	3198 018 73380	3U3 20%
5208	4822 157 71404	

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6001	5322 130 31938	BYV27-200
6002	4822 130 42488	BYD33D
6004	4822 130 30621	1N4148

6005	4822 130 30621	1N4148
6007	4822 130 30621	1N4148
6008	4822 130 30621	1N4148
6009	4822 130 30621	1N4148
6010	4822 130 30621	1N4148
6011	4822 130 30621	1N4148
6012	4822 130 30621	1N4148
6020	4822 130 82158	D3SBA60
6021	4822 130 42488	BYD33D
6023	4822 130 30621	1N4148
6024	4822 130 34167	BZX79-B6V2
6025	4822 130 30621	1N4148
6026	4822 130 30621	1N4148
6027	4822 130 30621	1N4148
6028	4822 130 30621	1N4148
6029	4822 130 30621	1N4148
6030	4822 130 30621	1N4148
6031	4822 130 34173	BZX79-B5V6
6032	4822 130 34173	BZX79-B5V6
6033	4822 130 34383	BZX79-B47
6035	4822 130 30621	1N4148
6101	5322 130 31938	BYV27-200
6102	4822 130 42488	BYD33D
6104	4822 130 30621	1N4148
6105	4822 130 30621	1N4148
6107	4822 130 30621	1N4148
6108	4822 130 30621	1N4148
6109	4822 130 30621	1N4148
6110	4822 130 30621	1N4148
6111	4822 130 30621	1N4148
6112	4822 130 30621	1N4148
6120	4822 130 82158	D3SBA60
6121	4822 130 11596	BYW29EX-200
6122	4822 130 11596	BYW29EX-200
6123	4822 130 30621	1N4148
6127	4822 130 30621	1N4148
6128	4822 130 30621	1N4148
6130	9336 018 60133	BZT03-C300
6131	4822 130 34281	BZX79-B15
6132	9336 018 60133	BZT03-C300
6133	4822 130 34281	BZX79-B15
6134	4822 130 30621	1N4148
6135	4822 130 30621	1N4148
6201	4822 130 11596	BYW29EX-200
6202	4822 130 11596	BYW29EX-200
6203	4822 130 83801	PBYR745F
6204	4822 130 42488	BYD33D
6205	4822 130 34167	BZX79-B6V2
6207	4822 130 30621	1N4148
6301	4822 130 30621	1N4148
6302	4822 130 30621	1N4148
6303	4822 130 34197	BZX79-B12
6304	9337 129 20673	
6305	4822 130 30621	1N4148
6306	4822 130 30621	1N4148
6311	4822 130 30621	1N4148
6312	4822 130 30621	1N4148
6313	4822 130 30621	1N4148
6314	4822 130 30621	1N4148
6315	4822 130 30621	1N4148
6316	4822 130 30621	1N4148
6317	9336 018 60133	BZT03-C300
6318	4822 130 34281	BZX79-B15
6319	9336 018 60133	BZT03-C300
6320	4822 130 34281	BZX79-B15
6321	4822 130 34382	BZX79-B8V2
6322	4822 130 34382	BZX79-B8V2
6323	4822 130 34382	BZX79-B8V2
6324	4822 130 34382	BZX79-B8V2
6325	4822 130 34382	BZX79-B8V2
6326	4822 130 34382	BZX79-B8V2
6330	4822 130 30621	1N4148
6331	4822 130 30621	1N4148
6332	4822 130 34278	BZX79-B6V8
6333	4822 130 30621	1N4148
6340	4822 130 30621	1N4148
6341	4822 130 30621	1N4148
6342	4822 130 30621	1N4148
6343	4822 130 30621	1N4148
6344	4822 130 30621	1N4148
6345	4822 130 30621	1N4148
6370	4822 130 30621	1N4148
6371	4822 130 30621	1N4148
6372	4822 130 30621	1N4148
6373	4822 130 30621	1N4148
6374	4822 130 30621	1N4148

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7001	9322 108 21682	MC34067P
7002▲	4822 130 11418	TCDT1102G
7003▲	4822 130 11418	TCDT1102G
7005	4822 130 10745	STW15NA50
7006	4822 130 10745	STW15NA50
7007	4822 130 44568	BC557B
7008	4822 130 44568	BC557B
7009	4822 130 40959	BC547B
7010	4822 209 81397	TL431CLPST
7011	4822 209 81397	TL431CLPST
7012	4822 209 81397	TL431CLPST
7013	4822 130 20297	BT169B
7014	4822 130 40959	BC547B
7015	4822 130 40959	BC547B
7016	4822 130 44568	BC557B
7017	4822 130 44568	BC557B
7018	4822 130 40959	BC547B
7019	4822 130 44568	BC557B
7020	4822 130 40959	BC547B
7021	4822 130 40959	BC547B
7101	9322 108 21682	MC34067P
7102▲	4822 130 11418	TCDT1102G
7103▲	4822 130 11418	TCDT1102G
7105	4822 130 63625	STP7NA60
7106	4822 130 63625	STP7NA60
7107	4822 130 44568	BC557B
7108	4822 130 44568	BC557B
7109	4822 130 40959	BC547B
7110	4822 209 81397	TL431CLPST
7111	4822 209 81397	TL431CLPST
7112	4822 209 81397	TL431CLPST
7113	4822 130 44568	BC557B
7114	4822 130 20297	BT169B
7117	4822 130 44568	BC557B
7118	4822 130 40959	BC547B
7120	4822 130 40959	BC547B
7121	4822 130 40959	BC547B
7122	4822 130 44568	BC557B
7201	9322 129 22687	L4977A
7202	4822 130 11421	BT151X-500R
7203	4822 209 12334	L4940V85
7204	4822 130 44568	BC557B
7205	4822 130 40959	BC547B
7301	4822 209 80797	LM393N
7302	4822 130 20297	BT169B
7311	4822 209 70672	LM358N
7313	5322 130 41888	BD140-16
7314	4822 130 20297	BT169B
7315	4822 130 20297	BT169B
7316	4822 130 40959	BC547B
7317	4822 130 40959	BC547B
7318	4822 130 40959	BC547B
7319	4822 130 40959	BC547B
7320	4822 130 40959	BC547B
7321	4822 130 44568	BC557B
7322	4822 130 40959	BC547B
7330	4822 209 80797	LM393N
7331▲	4822 130 11418	TCDT1102G
7332	4822 130 20297	BT169B
7333	4822 130 20297	BT169B
7335	4822 130 40959	BC547B
7336	4822 130 40959	BC547B
7337	4822 130 44568	BC557B
7338	4822 130 44568	BC557B
7339	4822 130 40959	BC547B
7340	4822 130 44568	BC557B
7341	4822 130 44568	BC557B
7370	4822 130 40959	BC547B
7371	4822 130 44568	BC557B
7372	4822 130 44568	BC557B

Led panel [LD]

Various

0311	4822 267 10734	CON 5P

⊣⊢

2001	4822 124 12095	100µF 20% 16V

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3001	4822 117 13577	330Ω 1% RC12H
3002	4822 117 11503	220Ω 1% 0.1W
3003	4822 051 10102	1k 2% 0.25W
3004	4822 051 10102	1k 2% 0.25W
3005	4822 051 20471	470Ω 5% 0.1W
3006	4822 117 10833	10k 1% 0.1W
3007	4822 051 20101	100Ω 5% 0.1W

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5001	4822 157 10548	47µH 5%

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6001	4822 130 83915	TLMV3100
6002	9322 113 17667	TSOP1736TB1

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7001	4822 130 60373	BC856B
7002	4822 130 60373	BC856B

PDP Limesco [PD]

Various

0300	2422 025 16007	CON 23P
0301	4822 265 31001	CON 5P
0302	2422 025 15924	CON 68P
0303	5322 255 40958	CON 8P
1400▲	4822 071 31002	FUSE (1A)
1401▲	4822 071 53151	FUSE (315MA)

⊣⊢

2018	5322 126 10511	1nF 5% 50V
2100	4822 126 13694	68pF 1% 63V
2101	5322 122 32448	10pF 5% 63V
2104	5322 122 32269	6.8pF 5% 50V
2106	4822 126 14585	100nF 10% 50V
2108	5322 122 32531	100pF 5% 50V
2109	4822 126 13751	47nF 10% 63V
2110	4822 126 14076	220nF 25V 20%
2111	4822 126 14585	100nF 10% 50V
2112	4822 126 14076	220nF 25V 20%
2113	4822 126 14076	220nF 25V 20%
2114	4822 126 14076	220nF 25V 20%
2115	4822 126 14076	220nF 25V 20%
2116	4822 124 80195	470µF 20% 10V
2117	4822 126 14076	220nF 25V 20%
2120	5322 122 32659	33pF 5% 50V
2121	5322 122 32287	4.7pF 5% 50V
2122	4822 126 13694	68pF 1% 63V
2150	4822 126 13694	68pF 1% 63V
2151	5322 122 32448	10pF 5% 63V
2154	5322 122 32269	6.8pF 5% 50V
2156	4822 126 14585	100nF 10% 50V
2158	5322 122 32531	100pF 5% 50V
2159	4822 126 13751	47nF 10% 63V
2160	4822 126 14076	220nF 25V 20%
2161	4822 126 14585	100nF 10% 50V
2162	4822 126 14076	220nF 25V 20%
2163	4822 126 14076	220nF 25V 20%
2164	4822 126 14076	220nF 25V 20%
2165	4822 126 14076	220nF 25V 20%
2166	4822 124 80195	470µF 20% 10V
2167	4822 126 14076	220nF 25V 20%
2168	5322 126 10511	1nF 5% 50V
2170	5322 122 32659	33pF 5% 50V
2171	5322 122 32287	4.7pF 5% 50V
2172	4822 126 13694	68pF 1% 63V
2200	4822 126 13694	68pF 1% 63V
2201	5322 122 32448	10pF 5% 63V
2204	5322 122 32269	6.8pF 5% 50V
2206	4822 126 14585	100nF 10% 50V
2208	5322 122 32531	100pF 5% 50V
2209	4822 126 13751	47nF 10% 63V
2210	4822 126 14076	220nF 25V 20%
2211	4822 126 14585	100nF 10% 50V
2212	4822 126 14076	220nF 25V 20%
2213	4822 126 14076	220nF 25V 20%
2214	4822 126 14076	220nF 25V 20%
2215	4822 126 14076	220nF 25V 20%
2216	4822 124 80195	470µF 20% 10V
2217	4822 126 14076	220nF 25V 20%
2218	5322 126 10511	1nF 5% 50V
2220	5322 122 32659	33pF 5% 50V
2221	5322 122 32287	4.7pF 5% 50V
2222	4822 126 13694	68pF 1% 63V
2300	4822 126 13694	68pF 1% 63V
2301	4822 126 14585	100nF 10% 50V
2302	5322 122 33538	150pF 2% 63V
2303	4822 126 12102	330nF 10% 16V

2304	4822 126 12102	330nF 10% 16V
2305	4822 126 12102	330nF 10% 16V
2306	4822 126 12102	330nF 10% 16V
2307	4822 126 13751	47nF 10% 63V
2308	5322 122 33244	8.2pF 5% 50V
2310	5322 122 33244	8.2pF 5% 50V
2311	5322 122 33244	8.2pF 5% 50V
2312	4822 126 13694	68pF 1% 63V
2313	4822 126 13694	68pF 1% 63V
2315	4822 126 13694	68pF 1% 63V
2316	4822 126 14076	220nF 25V 20%
2322	4822 126 14076	220nF 25V 20%
2324	4822 126 13751	47nF 10% 63V
2326	5322 122 33538	150pF 2% 63V
2327	4822 126 13694	68pF 1% 63V
2328	5322 122 33244	8.2pF 5% 50V
2329	5322 122 33244	8.2pF 5% 50V
2330	5322 122 33244	8.2pF 5% 50V
2333	4822 126 14076	220nF 25V 20%
2334	4822 126 14076	220nF 25V 20%
2335	4822 126 14076	220nF 25V 20%
2336	4822 126 14076	220nF 25V 20%
2340	4822 126 14076	220nF 25V 20%
2341	4822 126 14076	220nF 25V 20%
2342	4822 126 14076	220nF 25V 20%
2345	4822 126 14076	220nF 25V 20%
2346	4822 126 14076	220nF 25V 20%
2347	4822 126 14076	220nF 25V 20%
2350	4822 124 80195	470µF 20% 10V
2351	4822 124 80195	470µF 20% 10V
2353	4822 126 14076	220nF 25V 20%
2355	4822 126 14076	220nF 25V 20%
2356	4822 126 14076	220nF 25V 20%
2358	4822 126 14076	220nF 25V 20%
2360	4822 126 14076	220nF 25V 20%
2361	4822 126 14076	220nF 25V 20%
2362	4822 126 14076	220nF 25V 20%
2363	4822 126 14076	220nF 25V 20%
2364	4822 126 14076	220nF 25V 20%
2365	4822 126 14076	220nF 25V 20%
2366	4822 126 14076	220nF 25V 20%
2367	4822 124 23432	100µF 20% 10V
2370	4822 126 14076	220nF 25V 20%
2372	4822 124 11947	10µF 20% 16V
2373	4822 126 14076	220nF 25V 20%
2374	4822 126 14076	220nF 25V 20%
2375	4822 126 14076	220nF 25V 20%
2376	4822 126 14585	100nF 10% 50V
2377	4822 126 14076	220nF 25V 20%
2378	4822 126 14076	220nF 25V 20%
2379	4822 126 14076	220nF 25V 20%
2380	4822 126 14076	220nF 25V 20%

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3100	4822 051 20101	100Ω 5% 0.1W
3101	4822 117 11449	2k2 1% 0.1W
3102	4822 117 10833	10k 1% 0.1W
3105	4822 117 13577	330Ω 1% RC12H
3106	2322 734 62209	22Ω 1% RC12H
3107	4822 117 12955	2k7 1% 0.1W 0805
3108	4822 051 20332	3k3 5% 0.1W
3110	4822 051 20471	470Ω 5% 0.1W
3111	2322 734 62209	22Ω 1% RC12H
3112	4822 051 20101	100Ω 5% 0.1W
3113	4822 051 20471	470Ω 5% 0.1W
3115	4822 051 20223	22k 5% 0.1W
3116	4822 051 20332	3k3 5% 0.1W
3117	4822 051 20101	100Ω 5% 0.1W
3118	4822 051 10102	1k 2% 0.25W
3119	4822 117 11448	180Ω 1% 0.1W
3120	4822 117 10353	150Ω 1% 0.1W
3121	4822 051 20122	1k2 5% 0.1W
3122	4822 051 10102	1k 2% 0.25W
3123	4822 051 10102	1k 2% 0.25W
3124	4822 051 20182	1k8 5% 0.1W
3125	4822 051 20472	4k7 5% 0.1W
3126	4822 051 20105	1M 5% 0.1W
3127	4822 051 10102	1k 2% 0.25W
3128	4822 051 20122	1k2 5% 0.1W
3129	4822 051 20562	5k6 5% 0.1W 0805
3130	4822 051 20472	4k7 5% 0.1W
3131	4822 117 10833	10k 1% 0.1W
3133	4822 051 20332	3k3 5% 0.1W
3134	4822 117 11383	12k 1% 0.1W
3135	4822 051 20229	22Ω 5% 0.1W
3136	4822 117 11507	6k8 1% 0.1W
3137	4822 117 10361	680Ω 1% 0.1W
3138	4822 117 13085	5k6 1% RC12H
3139▲	4822 052 10228	2Ω2 5% 0.33W
3140	4822 051 20108	1Ω 5% 0.1W
3141	4822 051 20121	120Ω 5% 0.1W
3143	4822 051 10102	1k 2% 0.25W
3150	4822 051 20101	100Ω 5% 0.1W
3151	4822 117 11449	2k2 1% 0.1W
3152	4822 117 10833	10k 1% 0.1W
3155	4822 117 13577	330Ω 1% RC12H
3156	2322 734 62209	22Ω 1% RC12H
3157	4822 117 12955	2k7 1% 0.1W 0805
3158	4822 051 20332	3k3 5% 0.1W
3159	4822 051 10102	1k 2% 0.25W
3160	4822 051 20471	470Ω 5% 0.1W
3161	2322 734 62209	22Ω 1% RC12H
3162	4822 051 20101	100Ω 5% 0.1W
3163	4822 051 20471	470Ω 5% 0.1W
3165	4822 051 20223	22k 5% 0.1W
3166	4822 051 20332	3k3 5% 0.1W
3167	4822 051 20101	100Ω 5% 0.1W
3168	4822 051 10102	1k 2% 0.25W
3169	4822 117 11448	180Ω 1% 0.1W
3170	4822 117 10353	150Ω 1% 0.1W
3171	4822 051 20122	1k2 5% 0.1W
3172	4822 051 10102	1k 2% 0.25W
3173	4822 051 10102	1k 2% 0.25W
3174	4822 051 20182	1k8 5% 0.1W
3178	4822 051 20122	1k2 5% 0.1W
3179	4822 051 20562	5k6 5% 0.1W 0805
3180	4822 051 20472	4k7 5% 0.1W
3181	4822 117 10833	10k 1% 0.1W
3183	4822 051 20332	3k3 5% 0.1W
3184	4822 117 11383	12k 1% 0.1W
3185	4822 051 20229	22Ω 5% 0.1W
3186	4822 117 11507	6k8 1% 0.1W
3187	4822 117 10361	680Ω 1% 0.1W
3188	4822 117 13085	5k6 1% RC12H
3189▲	4822 052 10228	2Ω2 5% 0.33W
3191	4822 051 20121	120Ω 5% 0.1W
3193	4822 051 10102	1k 2% 0.25W
3200	4822 051 20101	100Ω 5% 0.1W
3201	4822 117 11449	2k2 1% 0.1W
3202	4822 117 10833	10k 1% 0.1W
3205	4822 117 13577	330Ω 1% RC12H
3206	2322 734 62209	22Ω 1% RC12H
3207	4822 117 12955	2k7 1% 0.1W 0805
3208	4822 051 20332	3k3 5% 0.1W
3210	4822 051 20471	470Ω 5% 0.1W
3211	2322 734 62209	22Ω 1% RC12H
3212	4822 051 20101	100Ω 5% 0.1W
3213	4822 051 20471	470Ω 5% 0.1W
3215	4822 051 20223	22k 5% 0.1W
3216	4822 051 20332	3k3 5% 0.1W
3217	4822 051 20101	100Ω 5% 0.1W
3218	4822 051 10102	1k 2% 0.25W
3219	4822 117 11448	180Ω 1% 0.1W
3220	4822 117 10353	150Ω 1% 0.1W
3221	4822 051 20122	1k2 5% 0.1W
3222	4822 117 11449	2k2 1% 0.1W
3223	4822 051 10102	1k 2% 0.25W
3224	4822 051 20182	1k8 5% 0.1W
3227	4822 051 10102	1k 2% 0.25W
3228	4822 051 20122	1k2 5% 0.1W
3229	4822 051 20562	5k6 5% 0.1W 0805
3230	4822 051 20472	4k7 5% 0.1W
3231	4822 117 10833	10k 1% 0.1W
3233	4822 051 20332	3k3 5% 0.1W
3234	4822 117 11383	12k 1% 0.1W
3235	4822 051 20229	22Ω 5% 0.1W
3236	4822 117 11507	6k8 1% 0.1W
3237	4822 117 10361	680Ω 1% 0.1W
3238	4822 117 13085	5k6 1% RC12H
3239▲	4822 052 10228	2Ω2 5% 0.33W
3241	4822 051 20121	120Ω 5% 0.1W
3243	4822 051 10102	1k 2% 0.25W
3301	4822 051 20223	22k 5% 0.1W
3302	4822 117 10361	680Ω 1% 0.1W
3303	4822 051 20105	1M 5% 0.1W
3305	4822 117 11148	56k 1% 0.1W
3306	4822 051 20471	470Ω 5% 0.1W
3307	4822 051 20229	22Ω 5% 0.1W
3308	4822 117 10837	100k 1% 0.1W
3309	4822 117 10837	100k 1% 0.1W
3310	4822 117 11503	220Ω 1% 0.1W
3311	4822 051 20229	22Ω 5% 0.1W
3312	4822 051 20273	27k 5% 0.1W
3313	4822 051 20105	1M 5% 0.1W
3314	4822 051 20105	1M 5% 0.1W
3315	4822 051 20105	1M 5% 0.1W
3318	4822 117 11148	56k 1% 0.1W
3320	4822 051 20471	470Ω 5% 0.1W
3321	4822 051 20229	22Ω 5% 0.1W
3322	4822 117 11503	220Ω 1% 0.1W
3323	4822 051 20229	22Ω 5% 0.1W
3324	4822 117 10965	18k 1% 0.1W
3326	4822 051 20105	1M 5% 0.1W
3330	4822 051 20479	47Ω 5% 0.1W
3331	4822 051 20479	47Ω 5% 0.1W
3332	4822 051 20479	47Ω 5% 0.1W
3334	4822 051 20479	47Ω 5% 0.1W
3335	4822 051 20479	47Ω 5% 0.1W
3336	4822 051 20479	47Ω 5% 0.1W
3337	4822 051 20479	47Ω 5% 0.1W
3338	4822 051 20479	47Ω 5% 0.1W
3339	4822 051 20479	47Ω 5% 0.1W
3340	4822 051 20479	47Ω 5% 0.1W
3341	4822 051 20479	47Ω 5% 0.1W
3342	4822 051 20479	47Ω 5% 0.1W
3343	4822 051 20479	47Ω 5% 0.1W
3344	4822 051 20479	47Ω 5% 0.1W
3345	4822 051 20479	47Ω 5% 0.1W
3346	4822 051 20479	47Ω 5% 0.1W
3347	4822 051 20479	47Ω 5% 0.1W
3350	4822 051 20479	47Ω 5% 0.1W
3351	4822 051 20479	47Ω 5% 0.1W
3352	4822 051 20479	47Ω 5% 0.1W
3353	4822 051 20479	47Ω 5% 0.1W
3354	4822 051 20479	47Ω 5% 0.1W
3355	4822 051 20479	47Ω 5% 0.1W
3356	4822 051 20479	47Ω 5% 0.1W
3357	4822 051 20479	47Ω 5% 0.1W
3360▲	4822 052 10228	2Ω2 5% 0.33W
3361	4822 051 20105	1M 5% 0.1W
3362	4822 051 10102	1k 2% 0.25W
3363	4822 051 10102	1k 2% 0.25W
3364	4822 051 20472	4k7 5% 0.1W
3367	4822 051 20479	47Ω 5% 0.1W
3368	4822 051 20479	47Ω 5% 0.1W
3369	4822 051 20479	47Ω 5% 0.1W
3371	4822 051 20101	100Ω 5% 0.1W
3372	4822 051 20101	100Ω 5% 0.1W
3374	4822 051 20101	100Ω 5% 0.1W
3375	4822 051 20101	100Ω 5% 0.1W
3376	4822 051 10102	1k 2% 0.25W
3377	4822 117 10833	10k 1% 0.1W
3378	4822 051 10102	1k 2% 0.25W
3379	4822 051 20333	33k 5% 0.1W
3380	4822 051 10102	1k 2% 0.25W
3381	4822 051 10102	1k 2% 0.25W
3382	4822 051 10102	1k 2% 0.25W
3383	4822 051 10102	1k 2% 0.25W
3384	4822 051 10102	1k 2% 0.25W
3386	4822 051 20101	100Ω 5% 0.1W
3387	4822 051 20101	100Ω 5% 0.1W
3390	4822 051 20105	1M 5% 0.1W
3391	4822 051 10102	1k 2% 0.25W
3392	4822 051 10102	1k 2% 0.25W
3393	4822 117 10833	10k 1% 0.1W
3395▲	4822 052 10228	2Ω2 5% 0.33W
3398	4822 051 10102	1k 2% 0.25W
3399	4822 051 10102	1k 2% 0.25W
3400	4822 117 10833	10k 1% 0.1W
3401	4822 117 10833	10k 1% 0.1W
3402	4822 117 10833	10k 1% 0.1W
3403	4822 051 20122	1k2 5% 0.1W
3404	4822 051 20122	1k2 5% 0.1W
3405	4822 051 20122	1k2 5% 0.1W
3406	4822 117 10361	680Ω 1% 0.1W
3407	4822 117 10361	680Ω 1% 0.1W
3408	4822 117 10361	680Ω 1% 0.1W
3409	4822 117 10833	10k 1% 0.1W
3411	4822 051 10102	1k 2% 0.25W
3412	4822 051 10102	1k 2% 0.25W
3414	4822 051 10102	1k 2% 0.25W
3415	4822 051 10102	1k 2% 0.25W
3416	4822 051 10102	1k 2% 0.25W
3417	4822 051 10102	1k 2% 0.25W
3418	4822 117 10837	100k 1% 0.1W
3438	4822 051 20229	22Ω 5% 0.1W
3439	4822 051 20109	10Ω 5% 0.1W
3440	4822 051 20109	10Ω 5% 0.1W
3441	4822 051 20109	10Ω 5% 0.1W
3442	4822 117 11449	2k2 1% 0.1W
3443	4822 117 11449	2k2 1% 0.1W
3444	4822 117 11504	270Ω 1% 0.1W
3445	4822 117 11504	270Ω 1% 0.1W
3446	4822 117 11504	270Ω 1% 0.1W
3447	4822 117 11449	2k2 1% 0.1W
3448	4822 051 20182	1k8 5% 0.1W
3449	4822 051 20182	1k8 5% 0.1W
3450	4822 117 10833	10k 1% 0.1W
3451	4822 051 10102	1k 2% 0.25W
3458	4822 051 20472	4k7 5% 0.1W
3459	4822 051 20472	4k7 5% 0.1W

3460	4822 051 20472	4k7 5% 0.1W

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5100	3198 018 36870	0U68 10%
5101	4822 157 11775	6.8µH 5%
5102	4822 157 11775	6.8µH 5%
5105	3198 018 34770	0U47 10%
5150	3198 018 36870	0U68 10%
5151	4822 157 11775	6.8µH 5%
5152	4822 157 11775	6.8µH 5%
5155	3198 018 34770	0U47 10%
5200	3198 018 36870	0U68 10%
5201	4822 157 11775	6.8µH 5%
5202	4822 157 11775	6.8µH 5%
5205	3198 018 34770	0U47 10%
5300	2422 549 43062	BEAD 100MHz 600R
5304	2422 549 43062	BEAD 100MHz 600R
5305	2422 549 43062	BEAD 100MHz 600R
5306	2422 549 43062	BEAD 100MHz 600R
5308	2422 549 43062	BEAD 100MHz 600R
5309	2422 549 43062	BEAD 100MHz 600R
5311	2422 549 43062	BEAD 100MHz 600R
5312	2422 549 43062	BEAD 100MHz 600R
5313	2422 549 43062	BEAD 100MHz 600R
5314	2422 549 43062	BEAD 100MHz 600R
5315	2422 549 43062	BEAD 100MHz 600R
5320	4822 157 11329	10µH 10%
5321	4822 157 11329	10µH 10%
5323	2422 549 43062	BEAD 100MHz 600R
5325	2422 549 43062	BEAD 100MHz 600R
5326	2422 549 43062	BEAD 100MHz 600R
5327	2422 549 43062	BEAD 100MHz 600R
5329	4822 157 11775	6.8µH 5%
5331	2422 549 43062	BEAD 100MHz 600R
5332	2422 549 43062	BEAD 100MHz 600R
5333	2422 549 43062	BEAD 100MHz 600R
5334	2422 549 43062	BEAD 100MHz 600R
5335	2422 549 43062	BEAD 100MHz 600R

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7100	4822 130 60383	BF824
7101	4822 130 60383	BF824
7102	4822 130 60511	BC847B
7104	4822 130 60511	BC847B
7108	4822 130 60383	BF824
7109	4822 130 60383	BF824
7110	4822 130 60383	BF824
7111	4822 130 60383	BF824
7115	4822 130 60373	BC856B
7116	4822 130 60511	BC847B
7117	9322 136 31668	TS922ID
7118	5322 209 11598	PC74HCT4538T
7120	4822 130 60511	BC847B
7121	4822 209 90752	74HCT04D
7122	4822 130 60511	BC847B
7123	4822 209 16257	TDA8714T/6
7124	4822 130 60373	BC856B
7150	4822 130 60383	BF824
7151	4822 130 60383	BF824
7152	4822 130 60511	BC847B
7154	4822 130 60511	BC847B
7158	4822 130 60383	BF824
7159	4822 130 60383	BF824
7160	4822 130 60383	BF824
7161	4822 130 60383	BF824
7165	4822 130 60373	BC856B
7166	4822 130 60511	BC847B
7167	9322 136 31668	TS922ID
7168	5322 209 11598	PC74HCT4538T
7170	4822 130 60511	BC847B
7172	4822 130 60511	BC847B
7173	4822 209 16257	TDA8714T/6
7174	4822 130 60373	BC856B
7200	4822 130 60383	BF824
7201	4822 130 60383	BF824
7202	4822 130 60511	BC847B
7204	4822 130 60511	BC847B
7208	4822 130 60383	BF824
7209	4822 130 60383	BF824
7210	4822 130 60383	BF824
7211	4822 130 60383	BF824
7212	9339 117 20623	N74F574D
7213	9339 117 20623	N74F574D
7214	9339 117 20623	N74F574D
7215	4822 130 60373	BC856B
7216	4822 130 60511	BC847B
7217	9322 136 31668	TS922ID
7218	5322 209 11598	PC74HCT4538T
7220	4822 130 60511	BC847B
7222	4822 130 60511	BC847B
7223	4822 209 16257	TDA8714T/6
7224	4822 130 60373	BC856B
7300	4822 130 60511	BC847B
7301	4822 130 60373	BC856B
7302	4822 130 60373	BC856B
7303	4822 130 10629	PMBF170
7304	9352 317 00118	74LVU04D
7305	5322 209 16384	PC74HCT9046AD
7306	4822 209 15885	74LVCU04D
7308	4822 209 15885	74LVCU04D
7309	4822 130 60511	BC847B
7310	4822 130 60511	BC847B
7311	5322 209 16384	PC74HCT9046AD
7312	4822 130 10629	PMBF170
7313	4822 209 15885	74LVCU04D
7314	4822 209 15885	74LVCU04D
7315	4822 130 60373	BC856B
7316	9339 117 20623	N74F574D
7317	9339 117 20623	N74F574D
7318	9339 117 20623	N74F574D
7319	4822 130 60373	BC856B
7320	3122 438 71001	CON.UPD93687GD
7327	9322 132 62682	MC141585DW
7330	4822 209 17235	74LVU04D
7331	4822 130 10629	PMBF170
7350	8204 000 72391	EPFG016TC144-3
7351	9338 516 60118	PCF8574AT (PHSE) R
7352	4822 242 72527	CST4,00MGW-TF01
7353	4822 209 17235	74LVU04D
7355	9339 117 20623	N74F574D
7357	8204 000 72401	EPC1441
7358	4822 209 15882	MC33269D
7359	4822 130 10629	PMBF170
7360	4822 130 60511	BC847B
7361	4822 130 60511	BC847B
7362	4822 130 60511	BC847B
7363	4822 130 60511	BC847B
7364	4822 130 60511	BC847B
7365	4822 130 60511	BC847B

Preconditioner [PR]

Various

0009▲	4822 265 11253	FUSE HOLDER
0010▲	4822 265 11253	FUSE HOLDER
0310▲	4822 265 31001	CON 5P
0311	4822 265 41392	CON 7P
0314▲	3104 311 00372	MAINS INLET
0319	3122 421 60171	SPRING
0321	3122 421 60171	SPRING
0322	3122 421 60171	SPRING
0323	3104 304 90271	INSULATING PLATE
1400▲	4822 253 30467	FUSE (6,3A)
1401▲	2422 086 10853	FUSE 10A
1402▲	4822 252 60151	SPARKGAP
1500▲	4822 070 35001	FUSE (500MA)

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2400▲	4822 126 13589	470nF 275V
2401▲	4822 121 10512	275V 220nF 20%
2402▲	2020 554 90148	470P 250V 20%
2403▲	2020 554 90148	470P 250V 20%
2404	4822 126 11308	47pF 5% 500V
2405▲	2020 554 90148	470P 250V 20%
2406	4822 126 11308	47pF 5% 500V
2407▲	2020 554 90148	470P 250V 20%
2500	4822 122 33799	1nF 10% 1KV
2501	4822 122 33799	1nF 10% 1KV
2503	2222 151 90002	22µF 400V 20%
2504	4822 124 40433	47µF 20% 25V
2505	4822 124 40769	4.7µF 20% 100V
2506	4822 122 33293	100pF 5% 50V
2507	4822 122 33293	100pF 5% 50V
2508	4822 124 40769	4.7µF 20% 100V
2509	4822 122 33293	100pF 5% 50V
2510	4822 124 81144	1000µF 16V
2511	4822 121 42476	33nF 10% 50V
2512▲	2020 554 90148	470P 250V 20%
2513	5322 121 42386	100nF 5% 63V
2520	4822 124 81151	22µF 50V
2600	4822 122 33799	1nF 10% 1KV
2601	4822 122 33799	1nF 10% 1KV
2604	2222 479 90086	1µF 400V 5%
2605	2222 479 90086	1µF 400V 5%
2606	2222 479 90086	1µF 400V 5%
2607	2222 479 90086	1µF 400V 5%
2608	4822 122 33293	100pF 5% 50V
2610	2222 375 90141	3N3 1K6V 5%
2611	4822 121 70581	1.5nF 5% 2KV
2615	2222 157 57331	330µF 450V
2616	2222 157 57331	330µF 450V
2640	5322 122 32311	470pF 10% 100V
2651	4822 121 41857	10nF 5% 250V
2652	4822 124 22652	2.2µF 20% 50V
2653	5322 122 32331	1nF 10% 100V
2654	4822 124 40433	47µF 20% 25V
2655	4822 121 51319	1µF 10% 63V
2656	5322 121 42386	100nF 5% 63V
2662	4822 124 11767	470µF 20% 25V
2663	4822 124 40207	100µF 20% 25V
2664	4822 124 40207	100µF 20% 25V
2665	5322 122 32311	470pF 10% 100V
2666	4822 122 33293	100pF 5% 50V
2683	4822 124 40207	100µF 20% 25V

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3400▲	2322 595 90021	VDR 1M
3401▲	4822 117 10118	1M 5% 0.5W
3402▲	4822 053 21475	4M7 5% 0.5W
3403▲	4822 053 21475	4M7 5% 0.5W
3404▲	4822 116 83872	220Ω 5% 0.5W
3500	4822 116 83883	470Ω 5% 0.5W
3501	4822 116 83883	470Ω 5% 0.5W
3502	4822 050 23303	33k 1% 0.6W
3503	4822 116 52276	3k9 5% 0.5W
3504	4822 101 11187	1k 30% LIN 0.1W
3505	4822 116 52283	4k7 5% 0.5W
3506	2322 329 90258	10Ω AC03 5%
3508▲	4822 052 11108	1Ω 5% 0.5W
3520	4822 116 83882	39k 5% 0.5W
3521	4822 050 11002	1k 1% 0.4W
3600▲	2322 662 93131	10Ω PTC
3601▲	2322 662 93131	10Ω PTC
3602▲	8204 000 72561	1Ω NTC
3606	2120 660 90042	PTC 16V 330Ω
3608	4822 116 52179	12Ω 5% 0.5W
3610	5322 116 53564	3Ω3 5% 0.5W
3613	2120 106 90565	0Ω1 2W 5%
3614	2120 106 90565	0Ω1 2W 5%
3615	2120 106 90565	0Ω1 2W 5%
3616	2120 106 90565	0Ω1 2W 5%
3640	4822 116 52219	330Ω 5% 0.5W
3641	4822 116 83883	470Ω 5% 0.5W
3642	4822 116 52202	82Ω 5% 0.5W
3650	2322 156 21305	1M 3 MRS25 1%
3651	4822 050 21003	10k 1% 0.6W
3652	4822 116 83866	1M 5% 0.5W
3653	4822 050 11002	1k 1% 0.4W
3654	4822 050 21003	10k 1% 0.6W
3663▲	4822 052 11108	1Ω 5% 0.5W
3665	4822 050 21003	10k 1% 0.6W
3666	4822 116 52175	100Ω 5% 0.5W
3667	4822 050 21003	10k 1% 0.6W
3668▲	4822 052 11108	1Ω 5% 0.5W
3670	4822 050 27504	750k 1% 0.6W
3671	4822 050 21003	10k 1% 0.6W
3680	4822 116 52283	4k7 5% 0.5W
3681	4822 050 21003	10k 1% 0.6W
3682	4822 050 21003	10k 1% 0.6W
3683	4822 050 21003	10k 1% 0.6W
3684	4822 050 21003	10k 1% 0.6W
3685	4822 116 52283	4k7 5% 0.5W
3690	4822 050 21003	10k 1% 0.6W
3999	4822 050 11002	1k 1% 0.4W

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5400▲	8228 001 32781	MAINS FILTER
5401▲	3122 138 38901	MAINS FILTER
5402▲	3122 138 38901	MAINS FITER
5500▲	8228 001 32691	STANDBY TRANSFORMER
5605	8228 001 32681	DIFF. MODE FILTER
5610	8228 001 32661	PRECON. TRANSFORMER
5612	4822 157 11411	BEAD 100MHz
5680▲	2422 132 07396	RELAY 2P 5V
5690▲	2422 132 07388	RELAY 2P 12V

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6500	4822 130 83147	DF06M
6501	9336 018 60133	BZT03-C300
6502	9336 018 60133	BZT03-C300
6503	4822 130 42488	BYD33D

6504	4822 130 42488	BYD33D
6505	5322 130 31938	BYV27-200
6600	9322 131 67679	GBU8JL-7000
6605	4822 130 80858	1N5062
6606	4822 130 80858	1N5062
6608	4822 130 30621	1N4148
6611	4822 130 83796	BYV29F-500
6640	4822 130 32245	BYV10-40
6641	4822 130 30621	1N4148
6642	4822 130 32245	BYV10-40
6651	4822 130 32245	BYV10-40
6652	4822 130 32245	BYV10-40
6654	4822 130 30621	1N4148
6660	4822 130 42488	BYD33D
6661	4822 130 42488	BYD33D
6662	4822 130 34281	BZX79-B15
6663	4822 130 30621	1N4148
6664	4822 130 32245	BYV10-40
6680	4822 130 42488	BYD33D
6681	4822 130 42488	BYD33D
6690	4822 130 42488	BYD33D
6691	4822 130 42488	BYD33D

7500	9322 114 74682	TOP210PFI
7501▲	4822 130 11418	TCDT1102G
7502	4822 209 81397	TL431CLPST
7520	4822 209 33433	MC34064P-5
7521	4822 130 40959	BC547B
7608	5322 130 44593	BC369
7610	9322 130 47687	FET STY34NB50
7640	4822 130 63316	BSN304
7641	4822 130 40981	BC337-25
7650	9322 130 69682	MC33368P
7654	4822 130 44568	BC557B
7660	5322 209 71759	MCT7815CT
7681	9322 140 62687	STD12NE06L-1
7684	4822 130 44568	BC557B
7690	4822 130 40959	BC547B

Switch panel [SD]

Various

0008	4822 276 13363	SPUL19C611-CP
0310	4822 265 41462	CON 7P
0311	4822 267 10734	CON 5P

uP panel

Various

0301	2422 486 80838	CON 42P
1000	2422 543 01079	XTAL 8MHz

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2000	2020 004 90283	10µF 10V 20%
2001	2020 004 90283	10µF 16V 20%
2002	2020 004 90297	100µF 16V 20%
2003	2020 004 90297	100µF 16V 20%
2004	2020 004 90297	100µF 16V 20%
2005	4822 126 14585	100nF 10% 50V
2006	4822 126 14585	100nF 10% 50V
2007	4822 126 13486	15pF 2% 63V
2008	4822 126 13486	15pF 2% 63V
2009	4822 126 14585	100nF 10% 50V
2010	4822 126 14585	100nF 10% 50V
2011	4822 126 14585	100nF 10% 50V
2012	4822 126 14585	100nF 10% 50V
2013	4822 126 14585	100nF 10% 50V
2014	4822 126 14585	100nF 10% 50V
2021	2020 004 90297	100µF 16V 20%
2022	4822 126 14585	100nF 10% 50V

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3000	4822 051 20822	8k2 5% 0.1W
3001	4822 117 11449	2k2 1% 0.1W
3002	4822 117 11449	2k2 1% 0.1W
3003	4822 117 11449	2k2 1% 0.1W
3004	4822 117 11449	2k2 1% 0.1W
3005	4822 051 20332	3k3 5% 0.1W
3006	4822 117 11449	2k2 1% 0.1W
3007	4822 117 11449	2k2 1% 0.1W
3008	4822 051 20332	3k3 5% 0.1W
3009	4822 051 20332	3k3 5% 0.1W
3010	4822 117 11449	2k2 1% 0.1W
3011	4822 051 10102	1k 2% 0.25W
3012	4822 117 11449	2k2 1% 0.1W
3013	4822 117 11449	2k2 1% 0.1W
4xxx	4822 051 10008	0Ω 5% 0.25W (1206)
4xxx	4822 051 20008	0Ω 5% 0.25W (0805)

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5001	4822 158 10604	6.8 µH
5002	4822 158 10604	6.8 µH
5003	4822 158 10604	6.8 µH

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6000	4822 130 83757	BAS216

7003	4822 209 15882	MC33269D
7004	4822 130 60373	BC856B